III. Management Organizations for Ping River Sub-basins

After the pilot sub-basin selection process was completed, the author's next assignment was to work on development of organizational models for sub-basin management organizations that could be tested within pilot sub-basins. Thus, while the Panya Consultants group began gathering more detailed information in pilot sub-basin areas, the author engaged in work on organizational models the findings of which are reported in this part of the report.

A. International Experience with River Basin Management Organizations

As an introduction, this first section surveys various international trends toward integrated river basin management, reviews some of the most recent comparative international literature on river basin organizations, and summarizes some of the major implications for RBO development. This sets the stage for following sections that examine contextual factors and trends at the sub-basin level in Ping River basin, discuss implications for structural considerations for sub-basin organizations, and propose an indicative array of RSBO organizational models for selection and adaptation through participatory processes. The final section discusses the process through which RSBOs can be established and developed in pilot sub-basins.

1. Movement toward integrated river basin management

Various elements of water management at river basin levels have existed in parts of the world since ancient times. Infrastructure and social organization associated with these efforts have waxed and waned through the centuries. Indeed, some of the existing organizations that we now recognize as river basin organizations were established during the early 20th century, although many of these are now undergoing various types of reform and re-engineering as they seek to adjust to changing conditions.

One important aspect of these changing conditions is a new wave of global interest in updating and broadening concepts associated with integrated watershed and river basin management, which is now also spawning a new generation of river basin organizations around the world. Many of the major ideas and concepts being employed in these efforts are reflected in events that have led to international agreements and institutional policy reforms, as well as in the emergence of various types of regional and global civil society organizations offering support functions facilitated through the internet.

(a) Intergovernmental agreements and institutional policy reform

The current large surge in interest in integrated watershed management at the river basin level began in 1992 with the twin events of the Dublin Conference on Water and the Environment and the United Nations Rio de Janeiro Conference on Environment and Development. The four key guiding principles formulated in Dublin and accepted in Rio are displayed in Figure 3-1.

These principles reflected the judgment that a more comprehensive approach to water management is necessary for sustainable development. This awareness, together with the need for participatory institutional mechanisms to involve all sectors of society in decision-making processes, called for new coordinating mechanisms, and a substantial range of institutions throughout the world began responding. Among the first were the European Union and the international development banks.

Figure 3-1.

Dublin Statement Principles

GUIDING PRINCIPLES

Concerted action is needed to reverse the present trends of over consumption, pollution, and rising threats from drought and floods. The Conference Report sets out recommendations for action at local, national and international levels, based on four guiding principles.

Principle No. 1 - Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment

Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. Effective management links land and water uses across the whole of a catchment area or groundwater aquifer.

Principle No. 2 - Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels

The participatory approach involves raising awareness of the importance of water among policy-makers and the general public. It means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.

Principle No. 3 - Women play a central part in the provision, management and safeguarding of water

This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.

Principle No. 4 - Water has an economic value in all its competing uses and should be recognized as an economic good

Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.

Source: Global Water Partnership: www.gwpforum.org

EU Water Framework Directive[13]

In the wake of the Dublin and Rio de Janeiro conferences, pressure for a fundamental rethink of water policy in the European Community came to a head in mid-1995: The European Commission, which had already been considering the need for a more global approach to water policy, accepted requests from the European Parliament's environment committee and from the Council of environment ministers. The Communication was formally addressed to the Council and the European Parliament, but also invited comment from all interested parties, such as local and regional authorities, water users and non-governmental organizations (NGOs). Various organizations and individuals responded in writing, with most comments welcoming the broad outline given by the Commission. A two day Water Conference was then hosted in May 1996, which was attended by some 250 delegates, including representatives of Member States, regional and local authorities, enforcement agencies, water providers, industry, and agriculture, as well as consumers and environmentalists.

The outcome of the consultation process was a widespread consensus that, while considerable progress had been made in tackling individual issues, the current water policy was fragmented, in terms both of objectives and of means. All parties agreed on the need for a single piece of framework legislation to resolve these problems. In response to this, the Commission presented a Proposal for a Water Framework Directive with the following key aims:

- water management based on river basins
- expanding the scope of water protection to all waters, surface waters and groundwater

[13] See www.europa.eu.int/comm/environment/water/water-framework/index_en.html

- getting citizens involved more closely
- achieving "good status" for all waters by a set deadline
- "combined approach" of emission limit values and quality standards
- getting the prices right
- streamlining legislation

The directive specifies a single system of water management: River basin management. This was seen as a better model than administrative or political boundaries. Initiatives in Maas, Schelde and Rhine river basins served as positive examples of this approach. Management is to include:

- The river basin management plan. For each river basin, some of which traverse national frontiers - a "river basin management plan" will be established and updated every six years, and will provide the context for co-ordination requirements. The plan is a detailed account of how the objectives set for the river basin (ecological status, quantitative status, chemical status and protected area objectives) are to be reached within the timescale required. The plan will include all the results of analysis: the river basin's characteristics, a review of the impact of human activity on the status of waters in the basin, estimation of the effect of existing legislation and the remaining "gap" to meeting these objectives; and a set of measures designed to fill the gap. An economic analysis of water use within the river basin must also be carried out, in order to enable a rational discussion on the cost-effectiveness of various possible measures. It is essential that all interested parties are fully involved in this discussion, and indeed in the preparation of the river basin management plan as a whole.

- Public participation. In getting EU waters clean, the role of citizens and citizens' groups is viewed as crucial. There are two main reasons for an extension of public participation.

  The first is that decisions on the most appropriate measures to achieve objectives in the river basin management plan will involve balancing the interests of various groups. Economic analysis is intended to provide a rational basis for this, but it is essential that the process is open to the scrutiny of those who will be affected.

  The second reason concerns enforceability. The greater the transparency in establishing objectives, imposing measures, and reporting standards, the greater the care Member States will take to implement the legislation in good faith, and the greater the power of the citizens to influence the direction of environmental protection, whether through consultation or through complaints procedures and the courts. Care of Europe's waters will require more involvement of citizens, interested parties, non-governmental organizations (NGOs), so the directive requires full disclosure of information and consultation when river basin management plans are established. Furthermore, a biannual conference provides for a regular exchange of views and experiences in implementation, and a network for exchange of information and experience between water professionals throughout the Community.

World Bank policy reform

The World Bank responded within the first year following the Dublin and Rio conferences by publishing a new policy paper on water resources management [World Bank 1993]. It proposed a new approach to managing water resources that is to ‘build on the lessons of experience’. At its core is the adoption of a comprehensive policy framework and the treatment of water as an economic good, combined with decentralized management and delivery structures, greater reliance on pricing, and fuller participation by stakeholders.

The policy places emphasis on developing “a comprehensive framework of analyzing policies and options, to help guide decisions about managing water resources in countries where significant problems exist, or are emerging, concerning the scarcity of water, the efficiency of service, the allocation of water, or environmental damage…*The framework would facilitate the consideration of relationships between the ecosystem and socioeconomic activities in river basins. The analysis should take account of social, environmental, and economic objectives; evaluate the status of water resources within each basin; and assess the level and composition of projected demand. Special attention will be given to the view of all stakeholders*”. (emphasis added)

"The results of analyses at a river basin level would become part of the national strategy for water resource management. The analytical framework would provide the underpinnings for formulating public policies on regulations, incentives, public investment plans, and environmental protection and on the inter-linkages among them. It would establish the parameters, ground rules, and price signals for decentralized implementation by government agencies and the private sector. Decentralizing the delivery of water services and adopting pricing that induces efficient use of water are key elements of sound water resource management. But, for decentralized management to be effective, a supportive legal framework and adequate regulatory capacity are required, as well as a system of water charges to endow water entities with operational and financial autonomy for efficient and sustainable delivery of services". [World Bank 1993, p. 11]

The policy goes on to mandate inclusion in country policy dialogues and country assistance strategy formulations development of: (i) a national comprehensive analytical framework; (ii) institutional and regulatory systems; (iii) incentives; (iv) poverty alleviation; (v) decentralization; (vi) participation; (viii) health and environmental protection, including rural and agricultural pollution, urban and industrial pollution; groundwater protection and needs of water-dependent ecosystems; (ix) cooperative management of international resources [World Bank 1993, p. 67-76].

After nearly a decade of experience with this policy, the World Bank's Operations Evaluation Division conducted an independent evaluation of progress [Pitman 2002]. Findings from the study were a major feature in processes that led to a further articulation of World Bank policy in the form of a new water resources sector strategy document [World Bank 2004]. Among the 'messages' contained in this document is one that states, *The main management challenge is not a vision of integrated water resources management but a "pragmatic but principled" approach that respects principles of efficiency, equity and sustainability while recognizing that water resources management is intensely political and that reform requires the articulation of prioritized, sequenced, practical and patient interventions.* Another notes that the policy provides broad principles and not inflexible prescriptions, and that *What is appropriate in a particular country (or region) at a particular time will involve adaptation of these general principles to the specific economic, political, social, cultural and historical circumstances.*

Asian Development Bank policy reform

The regional development banks followed fairly similar approaches. Beginning in 1996, the Asian Development Bank (ADB) began convening regional water policy consultation workshops, which in 1997 and 1998 were held in collaboration with the Global Water Partnerships (see below). The ADB found that these consultations "demonstrated a sense of urgency among stakeholders to avoid a crisis of scarcity, pollution, and environmental degradation by adopting a more holistic and integrated approach to future investments in water and its management." They also revealed, "that institutional reforms are key to effectively addressing the technical, economic, social and environmental issues concerning water" [ADB 2001, p. 9-10]. ADB also acknowledged "broad global agreement on the approaches to improved water resources management", as indicated in the policy of the World Bank, the EU framework for water management, and the 1998 adoption by OECD of the integrated water resource management model in its analysis of the performance and challenges of water management in its member countries.

Accordingly, in 2001 the ADB published a new water policy document [ADB 2001]. Under the banner of "water for all", the policy's principal elements include:

(i) Promote a national focus on water sector reform. Developing member countries will be supported to adopt effective national water policies, water laws, and sector coordination arrangements; improve institutional capacities and information management; and develop a national action agenda for the water sector. Throughout, the needs of the poor will be specifically factored into legal, institutional, and administrative frameworks.

(ii) Foster the integrated management of water resources. Integrated management will be based on conducting comprehensive water resource assessments, and concentrating interlinked water investments in river basins.

(iii) Improve and expand the delivery of water services. Focusing on water supply and sanitation (both rural and urban), irrigation and drainage, and other subsectors, support will be provided for autonomous and accountable service providers, private sector participation, and public-private partnerships, emphasizing equity in access to water for the poor and underserved.

(iv) Foster the conservation of water and increase system efficiencies. Packages that combine water use and resource management charges to recover costs, improved regulation and increased public awareness, as well as provisions to ensure that the poor are not excluded, will be supported.

(v) Promote regional cooperation and increase the mutually beneficial use of shared water resources within and between countries. The primary focus will be on the exchange of information and experiences in water sector reform. Support will be provided to enhance awareness of the benefits of shared water resources, create sound hydrologic and socio-environmental databases relevant to the management of transboundary water resources, and implement joint projects between riparian countries.

(vi) Facilitate the exchange of water sector information and experience. Socially inclusive development principles will support and promote stakeholder consultation and participation at all levels, increase access to basic water services by poor consumers, and enhance water investments in the DMCs through public-private-community-NGO partnerships.

(vii) Improve governance. This will be accomplished by promoting decentralization, building capacity, and strengthening monitoring, evaluation, research, and learning at all levels, particularly in public sector institutions.

The policy also notes the approved ADB strategy for poverty reduction, and specifically provides for the involvement of the poor in water conservation and management. Since the specific needs and vulnerabilities of the poor are central in formulating sound and equitable water strategies, the poor must be enabled to influence decisions that affect their access to water for both consumptive and productive uses. The policy also notes the considerable potential for mobilizing community effort to directly contribute to pro-poor water development, and that knowledge bases of the water needs of the poor must be developed.

(b) Global and regional civil society organizations

With support from western countries, the World Bank, regional development banks, and other sources, a considerable range of new global and regional institutions have begun emerging to provide further support for integrated water resource management in river basin contexts. The following examples indicate how organizations are beginning to specialize at different levels, and build information and support to help meet the needs of various actors and stakeholders involved in these processes. One effect is a growing body of 'grey literature' that should not be ignored.

World Water Council[14]

The World Water Council seeks to be a global-level international water policy think tank dedicated to supporting the world water movement for improved management of the world's water resources and water services. In response to ideas discussed at the Dublin and Rio conferences, the International Water Resources Association organized a special session at its Eighth World Water Congress in Cairo during 1994, which resulted in a resolution to create the World Water Council. A founding committee was formed in 1995, and by 1996 the WWC was legally incorporated with its headquarters in Marseille, France. It has since organized a series of three World Water Forum events, and the fourth is to be held in Mexico during early 2006.

The mission of the Council is "to promote awareness, build political commitment and trigger action on critical water issues at all levels, including highest decision-making levels, to facilitate the effi-

[14] http://www.worldwatercouncil.org

cient conservation, protection, development, planning, management and use of water in all its dimensions on an environmentally sustainable basis for the benefit of all life on earth". Council objectives are:

- To provide a platform for a common strategic vision on water resources and water services management on a sustainable basis, and to promote the implementation of effective policies and strategies worldwide;
- To provide advice and relevant information to institutions and decision-makers on the development and implementation of comprehensive pro-poor policies and strategies for sustainable water resources and water services management, with due respect for the environment, and social and gender equity;
- To contribute to the resolution of issues related to transboundary waters.

World Water Forum events are seen as leading movement from the World Water Vision (a prospective view of the future state of global water resources presented at the 2nd Forum) to establishment of concrete actions and commitments derived from the 3rd Forum. The 4th Forum will focus on achievement of water-related Millennium Development Goals, and the Council seeks to establish cooperation and coordination mechanisms to transform the global vision into concrete actions that integrate local knowledge.

The Council also claims to have had a strategic role in promoting and facilitating establishment of dialogues at basin, local and national levels, on crosscutting issues that were not sufficiently addressed, such as Water for Food and Environment, and Water and Climate. In 2001, the Council established a Panel on Financing Water Infrastructure, whose mandate is to look for new sources of funding for water to achieve the 2025 'water security' scenario of the World Water Vision. The WWC is also home for the *Water Policy* journal, but its cost limits worldwide access.

Global Water Partnership[15]

The Global Water Partnership seeks to help build a working partnership among all those involved in water management – government agencies, public institutions, private companies, professional organizations, development agencies and others committed to Dublin-Rio principles. This wide-ranging partnership seeks to identify critical knowledge needs at global, regional and national levels, help design programs for meeting these needs, and serve as a mechanism for alliance building and information exchange on integrated water resources management. The GWP's specific objectives are:

- Clearly establish principles of sustainable water resources management,
- Identify gaps and stimulate partners to meet key needs with available human and financial resources,
- Support action at the local, national, regional or river basin level that follows sustainable water resources management principles,
- Help match needs to available resources.

The range and directions of its interests are reflected in the web-based “ToolBox” that GWP is in the process of developing (see Figure 3-2). Although now mostly still in early stages of development, web pages contain definitions, descriptions, characteristics, lessons learned, references, links to other sources, *etc*. Figure 3-3 displays the initial information on river basin organization characteristics and lessons learned.

As a further indicator of the flavor of information from GWP, their website suggests that four things need to be done to do to make water governance more effective

- establish water policies, laws, regulatory framework; devolve decision-making, encourage better service delivery by autonomous public sector agencies and private sector operators.

[15] http://www.gwpforum.org

- establish policies and institutional structures for managing river basins and aquifers and processes to overcome conflict over water allocation.
- facilitate realignment of economic and financial practices, including full cost pricing for water services - with appropriate mechanisms to protect the poor.
- establish with help of international partners mechanisms to strengthen river basin management, and transboundary water agreements allowing for equitable use of shared waters.

GWP-Southeast Asia[16]

In addition to its global activities and websites, the GWP is also developing regional-level platforms, including one in Southeast Asia. The GWP South-east Asia Technical Advisory Committee (GWP-SEATAC), whose members are professionals from several countries, including Thailand, developed the document "Our Vision for Water in the 21st Century" as a Southeast Asia contribution to the Second World Water Forum and Ministerial Conference at The Hague, the Netherlands during 2000 [GWP-SEATAC 2000]. The document includes Southeast Asia's framework for action for a better water future, formulated to meet the foremost challenges facing the region, which are seen to be:

- Managing water resources efficiently and effectively
- Moving towards integrated river basin management
- Translating awareness to political will and capacities
- Moving towards adequate and affordable water services

Thailand has been an active participant in GWP activities in Southeast Asia, largely through the initiative of Dr. Apichart Anukularmphai and his colleagues, who were central in efforts

Figure 3-2. *The GWP "ToolBox"*

A: THE ENABLING ENVIRONMENT
- A1. Policies setting goals for water use, protection & conservation.
  - A1.1. Preparation of a National Water Resources Policy.
  - A1.2. Policies with relation to water resources.
- A2. Legislation water policy translated into law.
  - A2.1. Water rights.
  - A2.2. Legislation for water quality.
  - A2.3. Reform of existing legislation.
- A3. Financing & incentive structures - allocating financial resources.
  - A3.1. Investment policies.
  - A3.2. Public sector institutional reform.
  - A3.3. Role of the private sector.
  - A3.4. Cost recovery and charging policies.
  - A3.5. Investment appraisal.

B: INSTITUTIONAL ROLES
- B1. Creating an organisational framework forms & functions.
  - B1.1. Transboundary organisations for water resource mgmt.
  - B1.2. National apex bodies.
  - B1.3. River basin organisations.
  - B1.4. Regulatory bodies and enforcement agencies.
  - B1.5. Service providers and IWRM.
  - B1.6. Civil society institutions & community based organisations.
  - B1.7. Local authorities.
- B2. Institutional capacity building developing human resources.
  - B2.1. Participatory capacity and empowerment.
  - B2.2. IWRM capacity in water professionals.
  - B2.3. Regulatory capacity.
  - B2.4. Knowledge sharing.

C: MANAGEMENT INSTRUMENTS
- C1. Water resources assessment - understanding resources & needs.
  - C1.1. Water resources knowledge base.
  - C1.2. Water resources assessment.
  - C1.3. Modelling in IWRM.
  - C1.4. Developing water management indicators.
- C2. Plans for IWRM - options, resource use, human interaction.
  - C2.1. River basin plans.
  - C2.2. Risk assessment and management.
- C3. Demand management - using water more efficiently.
  - C3.1. Improved efficiency of use.
  - C3.2. Recycling and reuse.
  - C3.3. Improved efficiency of water supply.
- C4. Social change instruments - water-oriented civil society.
  - C4.1. Education curricula on water management.
  - C4.2. Training of professionals.
  - C4.3. Training of trainers.
  - C4.4. Communication with stakeholders.
  - C4.5. Water campaigns and awareness raising.
  - C4.6. Broadening participation in water resources mgmt.
- C5. Conflict resolution - managing disputes & ensure water sharing.
  - C5.1. Conflict management.
  - C5.2. Shared vision planning.
  - C5.3. Consensus building.
- C6. Regulatory instruments - allocation and water use limits.
  - C6.1. Regulations for water quality.
  - C6.2. Regulations for water quantity.
  - C6.3. Regulations for water services.
  - C6.4. Land use planning controls and nature protection.
- C7. Economic instruments - value & prices for efficiency & equity.
  - C7.1. Pricing of water and water services.
  - C7.2. Pollution charges.
  - C7.3. Water markets and tradeable permits.
  - C7.4. Subsidies and incentives.
- C8. Information management & exchange - improve knowledge.
  - C8.1. Information management systems.
  - C8.2. Data sharing - national and international.

[16] http://www.gwpseatac.org

Figure 3-3. From the GWP ToolBox: B1.04. River Basin Organizations

Characteristics

River basin organisations (RBOs) are specialised organisations set up by political authorities, or in response to stakeholder demands. RBOs deal with the water resource management issues in a river basin, a lake basin, or across an important aquifer. The focus here is the basin organisations that are domestic, not transcending state boundaries. River basin organisations provide a mechanism for ensuring that land use and needs are reflected in water management - and vice versa. Experience has varied dramatically in the ability of these organisations to achieve IWRM. Their functions vary from water allocation, resource management and planning, to education of basin communities, to developing natural resources management strategies and programs of remediation of degraded lands and waterways. They may also play a role in consensus building, facilitation and conflict management (C5).

Recent innovation has focused on an integrated river basin management approach (IRBM), a subset of IWRM, and catchment management rather than single sector approaches. (See also C2.2 Basin management plans)
The form and role of a river basin organisation is closely linked to its historical and social context. Key characteristics of sustainable river basin management are:

- Basin-wide planning to balance all user needs for water resources & provide protection from related hazards;
- Wide public and stakeholder participation in decision-making, local empowerment (B2.1);
- Effective demand management (C3);
- Agreement on commitments within the basin, and mechanisms for monitoring those agreements;
- Adequate human and financial resources.
- Varying opinions exist about the most effective scale of application: the success of a river basin organisation may depend on such things as, the level of human and institutional capacity of the civil society, the degree to which water resources are developed, and climatic variability (arid versus temperate river basins, for example). The policy and legislative framework will govern the purpose and effectiveness of the RBO.

Lessons learned

Experience shows that all RBOs evolve with time and see their composition and duties adapted from time to time reflecting the real needs of the moment. Successful river basin organisations are supported by:

- An ability to establish trusted technical competencies;
- A focus on serious recurrent problems such as flooding or drought or supply shortages, and the provision of solutions acceptable to all stakeholders;
- A broad stakeholder involvement, catering for grassroots participation at basin-wide level (*e.g.* water forums);
- An ability to generate some form of sustaining revenue;
- The capacity to collect fees, and attract grants and/or loans;
- Clear jurisdictional boundaries and appropriate powers.

to organize the First Southeast Asia Water Forum in Chiang Mai during 2003. The theme of that forum was 'conflict resolution and basin organizations'. It reaffirmed regional views on the need for both integrated water resource management and river basin organizations. Some of this effort now appears directed toward efforts of an ASEAN Working Group on Water Resource Management (AWGWRM) focusing on strengthening integrated water resource management in the region.

Network of Asian River Basin Organizations (NARBO)[17]

Acknowledging that integrated water resources management needed partnerships for action, and that such partnerships need support through knowledge sharing and capacity building, the Network of Asian River Basin Organizations (NARBO) was established to share knowledge and build capacity for IWRM in river basins throughout monsoon areas of Asia. NARBO was jointly established in 2003 during the 3rd World Water Forum through a letter of intent signed by the ADB, the ADB Institute, and the Japan Water Agency (JWA). The network was officially launched during November 2003 at the 1st Southeast Asian Water Forum held in Chiang Mai, and its charter was ratified during its first general meeting in Indonesia during February 2004.

The goal of NARBO is to achieve integrated water resources management in river basins throughout Asia. Its objective is to strengthen the capacity and effectiveness of RBOs in promoting IWRM and improving water governance, through training and exchange of information and experiences

[17] http://www.narbo.jp

among RBOs and their associated water sector agencies and knowledge partner organizations. Its scope of activities includes:

- Promoting advocacy, raising awareness, sharing information, good practices and lessons learned on IWRM through the NARBO web site, publications, case studies, electronic newsletter, guidelines and sourcebooks, and media relations.
- Supporting establishment of river basin organizations (RBOs).
- Supporting NARBO members to improve water governance for IWRM through capacity building of RBOs by training courses, workshops, performance benchmarking activities, advisory visits, scholarship programs, RBO exchange visits, staff exchange programs, and twinning programs.
- Building capacity of RBOs to implement IWRM through technical advice on planning, conservation, development, and the proper and efficient operation and maintenance of water resources facilities.
- Fostering regional cooperation for improved management of water resources in transboundary river basins.

As of January 2005, NARBO membership includes 12 River Basin Organizations (including the Bang Pakong River Basin in Thailand), 15 government organizations (including Thailand's Ministry of Natural Resources and Environment), 15 regional "knowledge partners" (including the Thailand Water Resources Association chaired by Dr. Apichart Anukulamphai), 3 inter-regional knowledge partners, and one multilateral development cooperation partner (ADB). Its website is managed by the Japan Water Agency in collaboration with ADB and the ADB Institute. The ADB Institute will also lead work on developing guidelines and sourcebook materials on IWRM practices and lessons learned, river basins in Asia, standards and manuals, and other topics of interest to be shared through website downloads and CDs, in collaboration with JWA, ADB, the International Water Management Institute, the Mekong River Commission, and other interested partners.

Training activities conducted thus far include the 1st NARBO training on IWRM held during 2004 in Thailand, a benchmarking workshop, and its 2nd IWRM training workshop held in Sri Lanka during April 2005. It also has held general meetings, initiated twinning arrangements, and plans the 3rd training course for November 2005 in Korea. It also plans to participate in the 2nd Southeast Asia Water Forum scheduled for August 2005 in Indonesia.

2. Recent international literature on river basin organizations

This section introduces key recent international literature on river basin organizations of a more conventional nature by first presenting a very brief picture of recent trends in international river basin literature, followed by a focus on findings from some very recent major reviews and comparative studies of river basin organizations supported by the World Bank.

(a) Recent trends in international literature

Given the policies, resources and human effort being directed toward these worldwide efforts to promote integrated water resources management through river basin organizations, it should not be surprising that it is also leading to a very rapid growth in the literature associated with these subjects. As might be expected, much of this literature has been generated by research staff based in development banks and their networks of associates, including key centers of the Consultative Group for International Agricultural Research (CGIAR)[18] now operating under the Future Harvest banner, and especially the International Water Management Institute (IWMI)[19], the International Food Policy Research Institute (IFPRI)[20], and their academic colleagues. Indeed, internationally funded initiatives such as the CGIAR system-wide Food and Water Challenge Programme are likely to further stimulate research activity generating such literature.

[18] See www.cgiar.org
[19] See www.iwmi.org
[20] See www.ifpri.org

Given the relatively limited access that this author has to more conventional repositories of international literature, which increasingly reside in ever more expensive journals and books published in major centers in developed western countries, this section is based primarily on literature that is available in the public domain and accessible via the open internet. This in itself has been an instructive experience because these are the same limitations that are faced by people in the vast majority of "developing world" contexts where integrated water resources management in a river basin context is being promoted. One advantage is that most all literature cited in this and following sections in this part of the report is included in PDF versions on a CD that accompanies this report.

Assuming the literature accessible for this review is reasonably representative, there seems to have been three general but somewhat overlapping surges of relevant literature since the Dublin and Rio Conferences. The first surge of literature appears to have focused primarily on reviewing existing theory and experience. As momentum for integrated water resource management and promotion of River Basin Organizations was first building during the mid-1990's, new reviews of earlier experience began to be published [*e.g.* Lee 1995]. One obvious early target for a case study example was the Tennessee Valley Authority (TVA) in the United States [Miller 1998], and researchers began digging into more that would emerge later. Researchers also began to review the growing body of research on local organizations for natural resource management [*e.g.* Rasmussen 1995], as well as on integrated water resource systems [*e.g.* Keller 1996] modeling water resources management at the basin level [*e.g.* McKinney 1999], and taking a closer look at relationships between land use and maintenance of watershed and environmental services [Chomitz 1998, Calder 1999]..

In the second surge of literature, which seems to have begun growing rapidly near the turn of the millennium, continuing reviews helped provide building blocks for researchers to focus more on how several relevant lines of activity were beginning to converge. One area of convergence was embodied in work contributing to the emerging field of natural resource governance [*e.g.* Bruns 2000, Kaosa-ard 2000, Knox 2001, Dupar 2002]. Water resource engineering and economics began jointly exploring simulation modeling at different spatial scales [Droogers 2001], analyses of river basins began articulating hydronomic zones [Molden 2001b], risk began to be factored into integrated water resource management [Rees 2002], and water use and productivity began to be assessed at river basin levels [Molden 2001c]. Linkages of land and water degradation with food and environmental security were reviewed [Penning de Vries 2003], and methods developed to assess land and water legal and institutional frameworks in Asia [Hannam 2003]. Building on emerging insights, a World Bank background paper articulated linkages between water and rural development [Molden 2001a], integrated water resource management was re-articulated in the new context [GWP TAC 2000], a framework was developed for more careful institutional analyses of water resources management in a river basin context [Bandaragoda 2000], and river basin closure and development trajectory concepts began emerging [Molle 2002, 2003]. There was also exploration of issues and gaps in linkages between policy and research on environmental services [*e.g.* Tomich 2004, Douglas 2005, FAO-Cifor 2005], as well as efforts to employ multiple types of simulation modeling to address policy questions that included sites in Thailand [van Noordwijk 2003].

Especially near the end of this period, we also begin to see emergence of some challenges to the "conventional wisdom" underlying especially policies of the World Bank and regional development banks regarding integrated water resources management and river basin organizations. Analysts in India [*e.g.* Shah 2002] began to be particularly prominent in efforts to articulate differences in contextual conditions in western developed societies where most examples of promising integrated water resource and river basin management have been cited, and conditions in densely settled, poor areas such as found in much of Asia. In a somewhat similar vein, issues related to the scale of orientation of river basin institutional arrangements, and needs for 'locally embedded processes' are identified by some as critical in contexts such as the Mekong River Basin [Miller 2003]. Some also began viewing debate reflecting contested views of civil society and its role in redefining state-society relationships as a key emerging arena of dialogue important for river basin management in Thailand and the Mekong Regions [Laungaramsri 2002].

These developments helped set the stage for the third surge of literature that has just begun emerging during the last two years. Much of the focus of this literature is on assessing Post-Dublin-Rio experience with river basin organizations, and particularly on how well they are functioning as resource management institutions. Although still quite short by many historical standards, there has been enough experience at many locations to make at least a preliminary round of assessments to see what lessons can be learned from this recent era of experience. While a substantial range of research supported by the World Bank and regional development banks is still underway, one of the first high priority lines of work has recently been releasing a series of outputs directly related to this project.

(b) World Bank sponsored comparative studies

Along with review [Pitman 2002] and further articulation of its water policy [World Bank 2004], several lines of research obtained World Bank support. Institutions organizing and contributing to various related and often cross-linked sets of studies have included the World Bank, the International Water Management Institute, the International Food Policy Research Institute, and various associated academic institutions.

One line of activity particularly relevant to this project is being conducted under the Agriculture and Rural Development Department in association with the Water Resources Management Group of the bank. The central theme of this work seems to have been captured rather well in the name of a major study *Integrated River Basin Management and the Principle of Managing Water Resources at the Lowest Appropriate Level*, which has now published a summary report on institutional and policy analysis of river basin management decentralization [Kemper 2005]. This work is based on a coordinated set of river basin institutional studies that includes:

(i). Accountability through decentralization: Lessons for integrated river basin management

This synthesis study was based on a review of literature on decentralization, including experience in various river basins from different continents, and in the fields of education, health care, roads, irrigation and public infrastructure, with the aim of drawing lessons for productive decentralization in integrated river basin management [Mody 2004]. The study's definition of its understanding and expectations of decentralization are worth quoting here:

> "Decentralization is a process of transitioning from a governance structure in which power is concentrated at the central or national level to one in which the authority to make decisions and implement them is shifted to lower level governments or agencies (including parastatal organizations). The resulting governing structure is anticipated to deliver public services more efficiently and equitably. Because of proximity to the locus of action, decentralization offers the prospect of lower transactions costs and the generation of information most relevant for serving the consumer of public services. As such, it is expected that decision-makers at decentralized levels may be held more directly accountable for the outcomes of their actions than an anonymous bureaucrat in the central government.

In addition to accountability, successful decentralization depends on a number of other factors including negotiated voluntary arrangements, conflict resolution mechanisms, and the institutions necessary to support them. Moreover, the study sees common challenges to decentralization as including: "(1) inadequate financing; (2) paucity in skills, particularly with respect to management and supervision; (3) resistance from those who benefit from the centralized structure; (4) how to sustain interest in the participatory process for the long term. Leadership is also critical to ensuring that administrative, political, and fiscal decentralization operate in tandem."

Findings of the study see key trade-offs between central control and decentralization that include:

- Centralization tends to have greater technological economies of scale;
- Decentralization tends to have lower transaction costs, due to greater information and accountability
- Decentralization can result in greater equity, if institutional structures for local accountability are present to prevent local elites from capturing all benefits.

- Conflict resolution is essential to reduce transaction costs and for any progress to be made under decentralization. Decentralized structures can more effectively reach negotiated resolution, but it may require clearly defined property or priority rights, whereas central authority can use more authoritarian means.
- Centralization can result in a larger pool of highly qualified technical expertise, whereas this tool may be dissipated with decentralization
- Regarding service provision, central agencies are best at providing services requiring advanced technical expertise, management and information that are difficult to provide through a distributed system, but decentralization may perform better where information about local conditions and more direct monitoring are important.
- Local tax bases, especially in developing countries, are inadequate to meet funding needs, whereas centralized agencies have access to funds that can be transferred to improve equity, but also to influence or distort local decision-making. This suggests need for a balance between central and local powers.

Lessons learned from other sectors suggest there are four high priority areas that need to be addressed in river basin decentralization: (1) devising ways to overcome financial inadequacy at the lower level; (2) making a commitment to incorporating opportunities to upgrade skills, particularly management skills, when designing programs while also ensuring that the expertise accumulated in central bureaucracies is not dissipated; simultaneously encouraging those facing retrenchment to contribute to the new systems wherever feasible; (3) assuring beneficiaries of the pre-reform structures that their rights would be protected; and (4) planning to sustain a long-term commitment to the decentralization process as it is likely to be slow and drawn out, perhaps by demonstrating positive outcomes in a key element of the sector in question.

(ii). A quantitative global analysis of experience with decentralization in river basins

This study is based on questionnaires returned from 83 river basin organizations from around the world [Dinar 2005]. Analysis of this data was also integrated into a broad cross-country analysis of the economics of water institutions and performance that was published as a monograph in institutional economics [Saleth 2004], which also includes an interesting recent review of institutional theory and interpretations associated with water and river basin management.

Four different sets of variables in the questionnaire result in findings that can be summarized as:

- Stressed resource conditions (*e.g.* water scarcity) and the presence of multiple major problems appear to be stimulants to effective action that result in perception of more improvement after decentralization, and more success in meeting basin management objectives.
- A relevant agenda based on broad basin management objectives that addresses all stakeholders' concerns and provide fora for dispute resolution are perceived to be effective and successful; some improvements take long periods of time before they can become evident.
- Government support is an important factor that has to be included at the right dose – supportive governmental involvement is good as long as it allows the stakeholders to initiate and lead the reform process.
- Presence of existing user groups in the basin is linked with greater improvements after decentralization, and an RBO budget is an important tool for management, enhancing participation, and if managed well, can promote the decentralization process.

(iii). Comparative study of institutional arrangements for river basin management in 8 basins

This research was based on much more in-depth studies of eight RBO's selected to represent a range of contexts and conditions. Study sites and sources of background and detailed institutional analysis on each include:

- Fraser River Basin in Canada [Calbick 2004, Blomquist 2005f];
- Tarcoles River Basin in Costa Rica [Ballestero 2003, Blomquist 2005e];
- Alto Tiete River Basin in southeastern Brazil [Johnsson 2005b];
- Jaguaribe River Basin in eastern Brazil [Johnsson 2005a];

- Guadalquivir River Basin in Spain [Giansante 2004, Blomquist 2005d];
- Warta River Basin in Poland [Blomquist 2005c];
- Murray Darling River Basin in Australia [Haisman 2004, Blomquist 2005b][21];
- Brantas River Basin in Indonesia [Ramu 2004, Bhat 2005].

Some of the key characteristics of the study river basins are presented in Figure 3-4, along with a few comparative points for the Ping River Basin. Basin institutional studies were combined into a comparative study of institutional arrangements for river basin management [Blomquist 2005a].

These studies found a very substantial range of basin characteristics, initial conditions and major water management problems across the 8 basins, as indicated in Figure 3-4, as well as differences in performance of the RBOs over time. Comparative analysis completed at this time has identified three factors associated with effective start-up of RBOs, and six factors associated with the longer-term sustainability of effective operations. Factors affecting start-up include:

- Stakeholder involvement. Means need to be established to attract the interest of all relevant stakeholders, and to get them actively involved in RBO processes. Means for accomplishing this have varied widely, but all of the 8 basins were successful in securing initial involvement.
- Incentives: One of the most important incentives for stakeholder involvement was the presence of major water resource problems, but prospects for infrastructure investments were also important in some cases. Strong cultural conflicts were only present in one case.
- Champions: Government commitment for support made them a champion in some basins, while individual charismatic leaders were very important in several. Supra-national influences in some basins included World Bank projects and the EU Water Framework Directive.

Factors affecting sustainability of effective RBO operations over the longer term include:

- Keeping stakeholders engaged: Stakeholder perceptions that they are engaged in important issues, and are making a positive difference are especially important. Consistency of government support is also important, as are regular and frequent interaction, and perceptions that their views and interests are welcome.
- Participatory decision-making: Stakeholders need to participate in substantive basin management decisions, which was most common in planning, water allocation, infrastructure operations, and design of headwater protection; but less common in levying water charges, collecting fees, flood control, monitoring, or altering land use.
- Balancing stakeholder incentives with achieving desired outcomes: Incentives need to be tied to performance criteria, to help assure that their involvement improves management.
- Responsiveness to environmental change: Conditions and problems change as a result of many factors, and in order to remain relevant the RBO needs to be able to effectively respond to changing environmental conditions.
- Consistency of government support: Consistency of government support is very important, and at least as important as magnitude of support in the longer term. Longevity is also associated with financial resources coming from multiple levels, and less reliance on central government funds is linked with autonomy to keep plans locally relevant.
- Managing conflict: It is important for opposing parties to have representation and ability to voice their views and communicate constructively. While champions are important in processes like this, for the longer term RBOs also need to develop mechanisms not dependent on them.

[21] Organizational arrangements in the Murray Darling River Basin are also promoted by Australians as a model for improved management in other areas, including the Mekong River Basin. For example, see http://www.mekong.es.usyd.edu.au/case_studies/rbm/MDMK/index.htm

Figure 3-4. River Basin sites with in-depth case studies

Continent	North America		South America		Europe		Australia	Asia	Thailand
Country	Canada	Costa Rica	SE Brazil	East Brazil	Spain	Poland	SE Australia	Indonesia	
River Basin Name	Fraser	Tarcoles	Alto Tiete	Jaguaribe	Guadalquivir	Warta	Murray-Darling	Brantas	Ping
Area (square kilometers)	238,000	2,155	5,985	72,560	57,017	55,193	> 1,000,000	11,800	34,659
Population (millions)	2.7	2.0	17.8	2.0	4.0	6.8	2.0	15.0	2.5
Principal water management problems									
• Flooding	X	X	X		X	X		X	
• Seasonal water scarcity			X	X	X	X	X	X	
• Drought exposure				X		X			
• Water storage				X					
• Water allocation				X	X		X		
• Inter-sectoral conflict	X			X	X		X		
• Pollution	X	X	X		X	X		X	
• River ecology							X		
• Erosion		X							
• Headland urbanization			X						
Basin organization initiation	1997	Early 1990's	1994 (1997/98)	Early 1990's	1927 (1985/99)	1991 (1999)	1914 (1992)	1990 (1999)	
• Central government initiation			X	**a. X**	X	X		X	X
• Stakeholder initiation	X	X					X		
• Accompanied by broader reforms			X	X	X	X		X	X
• Supra-national influence	-	IADB	WB	WB	EU	EU	-	WB	tech asst
Type of basin organization	NGO	Quasi-govt commission	committee + RB agency	Commission + state company	Central govt agency	Central govt agency	Inter-govt com-mission + self-finance unit	State company under water agency	?
Responsibilities									
• Planning &/or coordination	X	X	X	X	X	X	X	X	?
• Infrastructure operation & maintenance				X	X	X	X	X	?
• License water use / allocate supply				X	X			X	?
• Set / collect water charges				X	X			X	?
• Water quality monitoring				X	X		X		?
• Land use or new water use/discharge			X			X			?
Stakeholder organizations	multi-scale	Repres-entative	multi-scale	Sub-basin commit-tees	Repres-entative	none	Basin advisory committee	none	multi-scale
Funding sources	Gov+projects	Cent govt	Cent govt	Users	Govt+users	Cent govt	Govt+users	Govt+users	Govt

3. Major overall lessons for river basin organizations

This section draws on information from sources discussed in previous sections, in an effort to summarize some of the major lessons for river basin organization that can be learned from international experience. These lessons are then employed in and adapted to the specific context of sub-basins in the Ping River Basin in subsequent sections.

(a) Absence of a "blueprint" for RBOs

Not only are there are no blueprint models for river basin organizations, but the very notion is finally being discarded, and replaced with acceptance of diversity coupled with recognition of the need for RBOs to be 'localized' in their specific environmental, historical, cultural, social, political and economic context. Yet there are still many lessons to be learned from the diverse experience with RBOs from around the world. What is emerging from studies and experience, however, is that lessons need to be viewed at a somewhat more abstract level, in order to allow for variation associated with localization processes that drive adaptation for different specific contexts.

Thus, major elements for learning from this diverse experience include basic operational principles that are associated with different types and degrees of RBO performance, as well as considerations regarding organizational structure of RBOs that can facilitate or constrain their performance.

(b) Key principles for RBO operation and development

Basic concepts underlying all this current interest in RBOs have a fundamental central focus on integrated water resource management, decentralization and accountability.

Scope of IWRM-IRBM. A key basic proposition is that the increasingly complex and contentious context of water resource and river basin management requires its integration with a growing range of natural resource, environmental, economic, political, social, and cultural considerations. Indeed, it is the very importance of water to so many aspects of life and human society that is bringing us to this more complex approach requiring more holistic systems-oriented points of view. Thus, one of the first challenges is where to draw boundaries for the mandates of integrated water resource management and integrated river basin management, or how integrated is 'integrated'?

While there is considerable anxiety among many about the growing scope of integrated river basin management, there is a growing amount of evidence that RBOs with relatively wide mandates are better able to attract and hold interest of major stakeholders, who feel they are involved with work that is relevant to their needs, especially in basins where there are multiple major problems. Clarity and mutual understanding of the scope of an RBO mandate, however, as well as the capacity, organizational arrangements and resources to cope with it, are essential factors.

Subsidiarity and decentralization. Associated with this complexity is the concept of subsidiarity, which provides much of the rationale for decentralization programs. It is based on the key proposition that, especially in complex management systems, decisions are best made at the most local level where they are possible and viable. A corollary is that where local decisions are not possible or viable, they should be raised to the next higher level in the hierarchy, where the same principles are then applied. The end result is seen to be decisions that are made at their most appropriate levels, resulting in the greatest overall efficiency and equity possible for the management system. Thus, where systems are highly centralized, decentralization reforms are a means to improve subsidiarity, efficiency and equity.

Experience with decentralization to and within river basin organizations indicates: (1) There are some trade-offs, and centralized approaches may still be especially important where there are technological economies of scale, where substantial pools of high-level expertise need to be maintained, or where local tax bases are inadequate. Centrality is less effective where local experience, knowledge, negotiation or monitoring are required. (2) decentralization does appear to provide significant improvements in efficiency and equity in most decision-making processes, including re-

duced transaction costs and negotiated resolution of disputes, but it requires basic rules, procedures, and capacities in local institutions, and often clearly defined rights and priorities regarding access to and use of water and related natural resources [see also Bruns 2005].

Accountability. One of the important justifications for decentralization using the subsidiarity principle is that the resulting management system will have greater efficiency and equity. This is largely based on the proposition that decentralization results in improved accountability. This, in turn, results from the lower transaction costs associated with closer proximity, as well as generation of information that is more relevant for consumers of public services. Moreover, local decision-makers may be held more directly accountable for the outcomes of their actions than anonymous bureaucrats in central governments.

Experience with decentralization to and within RBOs indicates that greater accountability can indeed be achieved. This is dependent, however, on adequate local institutions to prevent benefit and organization capture by groups of local elites, on accessibility to venues for negotiation of disputes, and on sufficient stakeholder participation, leadership, expertise, information and financial resources. Funding from central sources can reduce accountability in decentralized systems when it is accompanied by conditions that distort local decisions, although it can also help achieve greater overall equity.

Moreover, in RBO organizational hierarchies there is a need for both upward and downward types of accountability. Most assessments of experience have focused on downward accountability to constituent stakeholders and consumers of public services, where decentralization can result in substantial improvements. They also acknowledge, however, that there is a need for upward accountability, at least to the degree that it can help assure that stakeholders located beyond the domain of local jurisdictions receive fair consideration and treatment of their legitimate views, concerns and needs. One manifestation of this concern about balance between local autonomy and central control is reflected in conclusions that a combination of funding from central and local sources is often associated with strong RBO performance.

(c) Structural considerations that can facilitate or constrain RBO performance

Assessments of experience indicate that structural characteristics of RBOs can either help to facilitate, or impose significant constraints on the performance of RBOs, while others are more neutral in their performance, but often important in specific social and cultural contexts. Major examples include:

Type of organization. RBOs come in a great variety of forms, that include agencies, committees, commissions, companies, NGOs, *etc*., and there are numerous sub-type variations for each of these. Indeed, even among the small sample of RBOs where the in-depth studies reported above were conducted, as figure 3-4 indicates, only two of them were of the same type (agencies of the central government), and several had different official identities for different parts of their operations. The main point is that the RBO is able to function effectively to achieve its objectives under its mandate, and its ability to do so under any given type of organizational format or official or legal identity will depend on what it seeks to do, how it seeks to do it, and how these different forms of organization are operationally, technically and legally defined and operated in the context of a specific society.

Levels of organization. There is wide variation among RBOs regarding the number of hierarchical levels of organization. Some have a single organizational level, while others have several nested organizational levels. Lower levels of organization can be made up of existing groups or organizations that associate themselves with the RBO, or they can be newly formed subsidiary units that have a dependent or relatively autonomous relationship with the RBO. While there are no major rules for what is best, there are conclusions that where relevant existing groups already exist, RBO performance is much better when they become building block units at more local levels. There are also observations that scale matters, in that as sub-units become smaller, their relative advantages

for various functions change. Thus, very small units often find local financing to be more difficult, there may be limitations in the pool of expertise available, they may find it difficult to employ technologies or conduct activities that have significant economies of scale, and it may be more difficult in some cases to avoid capture by local elites. On the other hand, very small units often have stronger interpersonal relationships and social capital, more shared views, experience, interests and needs that enables them to organize more efficiently and effectively. Thus, much depends on the local context of the RBO.

Stakeholder representation and roles. RBOs employing integrated water resource management principles clearly function best when the full range of stakeholders is represented and actively participating. Means for trying to achieve stakeholder participation, however, have varied widely, from RBOs with only informal interaction with stakeholder groups, to RBOs with elaborate stakeholder organizations at multiple nested levels. While most RBOs have been able to attract initial stakeholder interest, many have seen diminished stakeholder participation over time. Assessments of experience indicate that stakeholders need to perceive that they are engaged in important issues, that their views and interests are welcome and considered, that they actually participate in important decisions, that stakeholders with different views are treated fairly, and that real progress is being made toward achieving RBO objectives in an open, fair and equitable manner. And, actual stakeholder groups want representatives who really represent their views.

Leadership. Experience confirms that leadership and emergence of individual 'champions' is a very important factor in RBO performance. Top-down institutional leadership, however, appears to have a negative effect on performance. Moreover, where leadership is strongly focused on particularly charismatic local leaders, RBOs face a challenge in seeking to facilitate emergence of other leaders, or altering their approach in order to achieve long-term organizational sustainability.

Responsibilities. Again, there is a wide range in the types of roles played by RBOs. Most all of them have a major role in planning, policy and/or coordination functions, which is seen as one of the most important roles of most RBOs. Depending on the characteristics of the basin, its types of problems, and the quality, caliber and availability of expertise from different sources, the RBO may also play a major role in monitoring conditions and identifying and analyzing problems as part of the overall planning process cycle, and there may be various types of activities, projects or operations that it conducts directly. Some RBOs also play a major role in employing and operating regulatory or economic incentive tools, including registration, zoning, allocation, licensing, fees, *etc*., where they are relevant. Where RBOs operate and maintain water resource infrastructure, such as those for irrigation, water supply, drainage, or electrical generation, they often establish self-financing units that can take on the form of a parastatal or private company.

Information. Virtually all studies and assessments of experience agree on the need for high quality and openly accessible information. In some societies, this can be provided from a substantial range of sources with which the RBO can develop an alliance or collaboration. In many others, however, information and data are scarce and often of dubious quality, gaps are wide, expertise is low or highly concentrated in particular agencies or stakeholder groups, and public information access is not a cultural norm.

Coalitions and alliances. Increasingly, RBOs face a situation where they are expected to respond to broader mandates, but in a more decentralized manner. Experience confirms that, under the right conditions, this can increase stakeholder participation, accountability, efficiency and equity. But those 'right conditions' include needs for more capacity, tools, information, and other resources at local levels of distributed systems where such things are often scarce. Moreover, RBOs cannot do everything themselves, and most of them depend on agencies, local governments, civil society organizations, and private sector interests to implement their plans and provide various types of material, social and intellectual support for their operations. Accordingly, it is now widely recognized that RBOs need to join with a range of other groups and organizations to form and build coalitions,

alliances and networks at various levels, beginning within their basins, but extending outward as far as possible in all relevant directions.

Indeed, the emergence of efforts from local to global levels to support such coalitions and networks, and to accumulate and provide access to information, training and resources that can assist them in their efforts, is clearly evident from the growth of internet websites devoted to these issues, a few of which are mentioned in the first part of this section. While work they do is not yet recognized or incorporated into more academic reviews in the literature, it probably has far more potential for reaching and assisting the actual managers of RBOs.

(d) Management tools and policy instruments

One of the advantages of the web-based venues for information exchange is their orientation toward the interests and needs of users and actors. One interesting example of this is the organization of the web-based 'toolbox' for integrated water resource management that the Global Water Partnership is constructing.[22] They classify 'management instruments' under 8 categories:

- Water resource assessments (knowledge base, modeling, indicators, assessments)
- IWRM Planning (with a special sub-section on river basin plans)
- Demand management (use efficiency, recycling and reuse, supply efficiency)
- Social change instruments (curricula, training, communications, campaigns, participation)
- Conflict resolution: (shared vision planning, consensus building, conflict management)
- Regulatory instruments (regulations for water quality, quantity, services; land use control)
- Economic instruments (water pricing, pollution charges, water markets/trade, subsidies)
- Information (information management systems, data sharing)

The GWP toolbox also includes additional information under the heading of an 'enabling environment' that has information on water policies, laws, investment policies, incentive structures, cost recovery policies, and investment appraisal, which many economists or development organization types would consider "management instruments" at higher levels of social organization. The website design even includes ways to combine selected components of the toolbox to see how they might interact in contributing toward a 'solution' of a problem.

Some elements of various of these tools are incorporated into discussions in remaining sections of this report, in the more specific context of Ping River sub-basins and pilot management organizations for them. Other elements, and particularly those related to economic instruments, are the subject of a separate consultancy under this project, and thus not discussed further in this report.

[22] See figure 3-2 for full listing, or access at http://gwpforum.netmasters05.netmasters.nl/en/index.html

B. Structural Considerations for River Sub-Basin Organizations (RSBOs)

Having reviewed various characteristics, conditions, trends and current issues related to development of sub-basin organizations in the Ping River basin, as well as international experience with river basin organizations, this section turns to considerations necessary for configuring organizational structures and arrangements under the range of conditions present both in pilot sub-basins and in other Ping sub-basins targeted for future expansion. These considerations will help determine the identity, composition, range of responsibilities, and set of relationships in a RSBO. Subsequent sections employ these considerations in proposing an indicative array of potential organizational models from which sub-basins can choose and adapt, followed by suggestions for some basic stages and steps for establishing and further developing pilot Ping River sub-basin organizations (RSBOs).

1. Mandate, responsibilities & authority

These factors relate largely to the identity of the RSBO, and set the framework under which configuration of other components can be considered:

(a) Scope of the Mandate

As discussed in previous sections, the first wave of central government-initiated basin management activities in the Ping Basin focused quite narrowly on water resource issues. Especially in the Upper Ping, a second wave added emphasis on forest land use, pollution from agricultural chemicals and trash. This project is now committed to an even broader mandate for RSBOs that, in addition to natural resources and the environment, includes consideration of at least related public health and poverty-linked socio-economic equity issues. Moreover, one important component of the current confusion that needs to be addressed in this project is directly related to these expanding mandates.

In comparison with RBOs elsewhere that have been reviewed in recent international literature, initiatives in the Ping Basin have already become quite broad. Problem identification exercises under this project, as well as predecessor and parallel activities, indicate people understand that at least several dimensions of natural resource and environment issues will require quite broad consideration of issues related to quality of life and sustainability if fundamental causes of problems are to be effectively addressed. The CMU studies and plans seek to push the frontiers of consideration further into the realm of culture, esthetics, and other aspects of the quality of life in riparian communities.

Thus, this movement toward more holistic perceptions appears to be initiated from both national and local levels. Moreover, there appears to be an interesting parallel with trends in the administration hierarchy to focus efforts for coordination and integration at the most local levels of governance. Accordingly, although this may be a quite ambitious undertaking, it appears that conditions within the Ping Basin (and especially the Upper Ping) favor a broader, more holistic and integrated mandate for RSBOs. The main exception appears to come from elements of government agency hierarchies that would prefer, or feel constrained to keep matters focused on issues clearly within the mandate domains of their agency. This raises questions about ownership of these efforts, actual operational definitions of participation, and whose vision will be reflected in RSBO mandates.

It is also clear, however, that RSBOs cannot do everything, and that they are not intended to be a substitute or rival organization that competes with the development planning processes of the administration hierarchy. The challenge, then, if RSBOs are to employ broad considerations of natural resources, environment, livelihoods and life in their respective sub-basins, will be how to define RSBO roles and responsibilities in a way that can constructively complement regular development planning processes of local government, central agencies, and the administration hierarchy.

(b) Role and Responsibilities

Thailand appears committed to a multi-level RBO system, and even the earliest consultations indicate stakeholder groups are demanding this approach [Anukularmphai 2004a]. The degree and manner of engagement by stakeholders has also been evolving, along with the effective operational definition of stakeholder participation [Tan-kim-yong 2001]. Based on both Thai and international experience, there appear to be four general areas of possible roles and responsibilities where RSBOs need clarity:

- Problem identification & analysis. Up to this point in basin organization development, there have been two distinct pathways for problem identification and analysis. The first has been based on analysis by 'experts' from government agencies or their consultants that has relied heavily on available data sets obtained primarily from government agencies or research studies they have commissioned. The second has centered on local communities, local leaders, and local governments, often with facilitation or assistance from outsiders, who employ their detailed experience-based knowledge of local conditions to identify and analyze problems. Although there have been various common conclusions from application of these two different types of knowledge systems, there have also been some substantial differences [Walker 2002].

  Thus, recent projects, including this one, have been making increasing efforts to combine these two pathways, in order to provide cross-checks, as well as to benefit from the different strengths of both approaches. There are also efforts in some areas to adapt some of the scientific tools normally used only by government agency or academic research institutions for direct use by local communities [*e.g.* Thomas 2004a], as well as efforts by academic groups and some officials and NGOs to integrate local knowledge into their monitoring and research programs.

  In any event, there now appears to be widespread consensus that both types of knowledge systems are relevant to problem identification and analysis, and that activities at the sub-basin level should be seeking some type of synthesis. If a joint approach is accepted, the main issue then becomes whether RSBOs will be expected to take the lead in identifying and analyzing problems, with support by staff from agencies and other sources, or if leadership is provided by agencies and others, with RSBOs playing a supporting role.

- Program and project planning. This appears to be the area where general stakeholder support for a strong role by RSBOs is strongest, and this resonates with international experience. While ideas and suggestions for specific activities and projects have been, and are expected to be forwarded by government agencies and the range of other stakeholder groups, the RSBO is expected to play a major role in the screening, narrowing and sorting of what is desired by various stakeholders, into what is most acceptable and doable in short, medium and longer terms, according to priorities established for each time frame.

  The major challenges for the RSBO are to establish priorities and planning criteria that reflect the goals and objectives of their overall management program, to articulate how specific activities are expected to help achieve those objectives and goals, and to allocate available resources in a transparent manner according to mutually agreed upon priorities and criteria. In order to provide an overall framework for this type of approach, international experience suggests that an overall river sub-basin management plan needs to be developed. This usually requires a multi-year process that involves extensive stakeholder interaction, public discussion, consensus building and public education.

  At least at this point, major funding for implementation activities is expected to come from central government sources that would be distributed to appropriate implementation units. Thus, there is also a major question about the degree to which central agencies or other stakeholders influence the goals, objectives, criteria, and priorities employed in this process. Again, the issue is whether RSBOs will be expected to take the lead in these processes, with support by staff from agencies and other sources, or if leadership is provided by agencies and others, with RSBOs playing a supporting role.

- Implementation. There appears to be two lines of thinking about the potential role of RSBOs in implementing programs and projects in Ping sub-basins:

  The most common view is that RSBOs would primarily serve as ***planners and coordinators***, and specific action-oriented projects and activities will mainly need to be implemented through regular administrative and budgetary channels of some combination of local governments, local administrations, and/or central agencies. This is also common in international experience, except for cases where specific authorities, companies, or agencies are established to implement or operate what is usually some type of income producing infrastructure facility or service, or where activities are not conducted through other agencies or organizations. Since income generating types of operations have not yet been proposed for Ping RSBOs, this view would see RSBO implementation activities limited to those that are not conducted by other agencies or organizations in the sub-basins. Examples might include information, studies, consensus building, public education or various types of monitoring activities, as well as other areas that may emerge under the specific conditions in a particular sub-basin. Even where such activities are implemented directly through an RSBO, however, much or most of the organizing, mobilizing, and operating work may well be delegated to local building-block organizations associated with the RSBO, such as local networks or civil society organizations. In any event, emphasis is on working with local government and organizations to strengthen their capacity to implement programs and projects compatible with RSBO mandates and plans, and to only create new implementation channels to fill gaps in existing systems. Given this type of context, it is most likely that roles for sub-basin organizations in implementation processes for most major projects would be limited to advisory, assistance, and monitoring roles. Leadership of project implementation would most likely be specified in the project design, and budgets would be allocated and supervised by the relevant agency or local government unit.

  A second point of view sees RSBOs as much more ***implementers*** that could receive substantial amounts of funding directly from central government channels for the full range of major project activities under their mandate and plans. It is not very clear, however, the extent to which this view supports development of RSBO implementation capacity that would duplicate those of local governments, agencies, or other groups within the sub-basin. Experience both in Thailand (such as the Ministry of Interior's former Department of Accelerated Rural Development) and internationally suggests that efforts to duplicate or compete with such existing capacities would undermine rather than enhance the ability of RSBOs to develop effective integrated programs with broad-based stakeholder participation. While it might be feasible to develop RSBO capacity to receive block funding from central budgets that it could manage and allocate to local governments and organizations within their sub-basin, it is less clear how such a process could work in relationships to activities conducted by local units of central government agencies. This approach would also require much greater effort to develop RSBO financial management capacities and procedures providing transparency and accountability in managing relatively larger amounts of funds. There also needs to be careful consideration of the degree to which this might conflict with government concepts of not introducing additional levels of bureaucratic structure into national governance systems.

- Regulation. River basin organizations in other countries are sometimes tasked with applying tools to affect human behavior through regulatory or economic means. Examples include regulation of water use, water discharge quality, land use, *etc*., using methods such as licensing, taxation, zoning and prohibitions. To be effective, such tools also require authority for monitoring and enforcement. In Thailand, many of these options are currently limited by the absence of basic legislation related to water rights and to recognition of land use in upper watersheds. Moreover, exploration of what types of incentives may be possible, effective, and workable in pilot sub-basins is the subject of a separate specialized consultancy under this project. Thus, while this report does not consider these issues and aspects in detail, this could be another dimension of RSBO roles and responsibilities that will need to be considered. Such du-

ties could have structural implications for elements such as authority to issue and enforce regulations, as well as how to manage any financial flows that are associated with economic tools.

- Monitoring & learning. International experience seems mixed in the degree to which river basin organizations assume responsibility for monitoring functions. In many cases this appears to be related to a more narrow focus on water resources that can be monitored by trusted specialized units and agencies. At least three factors appear to be emerging in the Ping River Basin that would argue for a relatively strong RSBO role in monitoring. The first reason follows from the broad issue area mandate that seems to be emerging, at least in the Upper Ping, that will require information on conditions and parameters far more diverse than specific water resources that can be relatively easily instrumented (at least in more wealthy societies). The second reason is that the type of analysis and planning processes that will be required to fulfill this broad mandate over the long term will require an iterative learning process that will clearly require feedback information on how this range of conditions and parameters are changing over time. The third factor relates to the awareness raising and public education value of participation in monitoring and assessment processes, and active engagement in linking the findings with problem identification, analysis and planning in a learning cycle.

  While these arguments may seem to make monitoring an area of obvious importance for longer term management operations at the sub-basin level, it is perhaps the type of role that has had the least attention under initiatives in Thailand thus far. This may be related to the great emphasis on planning that has occupied most effort do date, along with the fact that little implementation of planned projects has actually been done (except for the numerous small check dams built last year in the Lower Ping). But it may also be related to aversions to monitoring and evaluation in general, as discussed in the previous section of this report.

  If a monitoring and learning component is to be incorporated into RSBO operations, there are three types of monitoring that will need to be developed: (1) monitoring inputs and outputs of projects implemented through the various channels of central agencies or local governments, in order to assure and understand linkages between plans and implementation and how they can be improved; (2) monitoring of local environmental and other parameters needed to assess changing conditions in the sub-basin, and assessment of improving conditions or emerging issues or problems; and (3) assessment of management program outcomes and their impact on target and other conditions in the sub-basin relative to their objectives and goals.

(c) Main Sources of Authority

In order to function effectively, river sub-basin organizations will also need to have various types of authority, depending on the nature of their roles and responsibilities. In any event, they will need to be able to convene meetings and workshops, including invitation of government officials and people from various sectors of society, as well as access to information from a range of official and other types of sources. RSBOs will need sufficient authority, or access to authority, to conduct planning processes that can be incorporated into central government and local government planning and budgetary processes. They will also need to be able to manage at least funds for their own operational activities. And to the extent that they may become involved with regulatory types of issues, they may also need at least access to authority for issuance of regulations or licenses, collection of any fees or taxes, and means for enforcement of compliance. If they lack these types of authority themselves, then they essentially become advisory bodies that would need to either be attached to, or otherwise formally linked with, some type and level of official organization, or become a semi-governmental organization with formal status. Where RSBOs retain only an advisory and public awareness role, they might remain a non-governmental organization with formal or informal legal status. International experience displays a wide range in primary sources of authority for RBOs, from government agency status, to semi-independent commissions or parastatal companies, to NGO status and authority.

In Thailand, RBO initiatives have thus far primarily been led by elements of the central government, most of which have now been consolidated within the Ministry of Natural Resources and

Environment (MoNRE) – exceptions include the Royal Irrigation Department and some others. Thus, responsibilities for planning programs to date have been assigned to departments within MoNRE (DWR and DNP) that have sufficient staff based in Ping sub-basins to seek and facilitate local participation in the planning processes. The various committees have been established through official directives issued either by agencies, or by provincial governors, who have very considerable authority in their jurisdictions including local administration operations. Local governments are seen as a very important source of increasing authority in the longer term, but their individual jurisdictions are relatively small. Thus, at the sub-basin level, authority derived from local government would need to be based on arrangements with multiple local government units, which could perhaps be facilitated by network relationships among them. An informal but potentially important additional source of authority can also come from general public awareness and consensus, especially if it can be mobilized through social or political channels to enforce its wishes on formal institutions at various levels.

Access by RSBOs to these various sources, types and levels of authority could vary, and is likely to be strongly influenced by the sense of involvement or ownership felt by each type of source in RSBO structures and operations. If, for example, the RSBO is seen as an extension of a central agency, it is likely to have strong access to the central authority of that ministry, but may lack substantial access to authority in other ministries, provinces and local administration, or local government. If, on the other hand, there are mutual perceptions of a real partnership arrangement, the RSBO may be able to access multiple sources of authority, but perhaps to a somewhat lesser degree than if it was under the exclusive authority of that source. In this case, much will depend on the ability of RSBO leadership to cultivate a common sense of ownership among the various sources of authority, and on incentives for the sources of authority to collaborate with RSBOs.

2. Representation: core membership, constituencies, selection processes

One of the key determinants of the sense of partnership or ownership of stakeholders in RSBO operations will relate to how they are represented in the membership and operational processes of the RSBO. And, the complexity of representational issues increases quite dramatically with the scope of the RSBO mandate, and the associated range of stakeholder interests and relevant sources of authority. Since emerging conditions in Ping River sub-basins suggest needs for a relatively broad mandate, and thus inclusion of stakeholders from various sectors and levels, considerations related to representation are likely to be both complex and important. Three general areas of consideration appear particularly important:

(a) Balance

Relevant stakeholders need to perceive that their interests and views are included in RSBO considerations, that they have a clear role in RSBO processes, and that decisions are not dominated by other particular factions or groups. One of the primary measures that can help establish such perceptions is balance in stakeholder representation in the organization. Thus, particular attention needs to be given to overall levels of balance of representation in several dimensions:

- Sector balance. Overall balance is needed among the various sectors of stakeholder interest that are relevant to the mandate of the RSBO, as well as the specific conditions that are present in that specific sub-basin. Moreover, sectors need to be considered on both an institutional and subject area basis. Examples of subject area sectors often include distinctions among forests, water, subsistence and commercial agriculture, industry, tourism & recreation, urban areas, public health, *etc*. In principle, there are various ways that these subject areas might be combined or further sub-divided in order to make them fit more appropriately with conditions in a particular sub-basin. Thus far, however, it appears the most common approach has been to define sectors to fit with institutional organization, and especially central government agencies. And given the nature of the government agency sub-culture, this means each relevant agency feels a strong need to have its own representative. Thus, if overall institutional balance is to be achieved, there needs to be at least as many representatives from outside government agencies.

Under broad mandates, numbers begin multiplying rapidly, and this does not yet included issues related to appropriate relative numbers, and thus weights of representation.

- Central-local balance. Another type of institutional balance reflects representation from at least operational home bases of stakeholders that are located at different levels of organizational hierarchies. Of particular concern would appear to be central agencies based in Bangkok, provincial administrations and associated decentralized agencies, and local governments. Similar types of levels may be relevant for private sector and/or civil society organizational units in some sub-basins. The common theme is balance among views that represent concerns of constituencies at these very different spatial, organizational, social, and political scales.
- Local balance. Even within the 'local' level, there are still several representational issues that may be important, although concern may vary according to sub-basin conditions and contexts. Local administration, local government, local civil society, and local private business can sometimes hold quite different 'local views' that are difficult to lump into the role of one or few representatives. Moreover, there are also concerns about representation of views of substantial numbers of local villagers, farmers, urban groups or other types of ethnic, cultural, social or livelihood groups that may differ from these institutional views, and there may be sentiment toward having participation by respected local leaders or figures who derive their personal charisma and/or respect from other types of sources (elders, teachers, monks, advisors, *etc*.). In sub-basins where ethnic minorities are stakeholders, there is clearly a need for their views to be adequately represented.
- Gender balance. This type of balance is not listed here as an effort to pander to the concerns of the World Bank or international audiences. Rather, it is a reflection of the fact that in all of the project meetings held thus far – at all levels – women have made up only a very tiny fraction of the people participating in these process events. While it is still very common in Thai society for men to dominate participation in public political and governmental events (in contrast to many other aspects of society and life), one cannot help but be somewhat concerned about how well interests of women are being represented in this process. This is especially true when broad RSBO mandates include water, agriculture, health, livelihood and other issues in which (as all stakeholders are aware) women play a very prominent, if not dominant role. It is also worth noting that no one ever seems to raise or explore this issue.

As these discussions indicate, full representation of all of these elements in a relatively large and complex sub-basin could grow to a very large number. Thus, it is important to consider whether particular types of representatives could be perceived as representing constituencies that include multiple components of groupings among which balance is sought. It may be worthwhile to invest in efforts to facilitate dialogue and negotiation among some of these stakeholder groups to explore potential for common representation. In any event, consideration must also extend to overall balance among components, and whether some should have relatively greater voice (and votes) than others in order to achieve an overall sense of equity.

(b) Scale of core membership

Social interaction processes change with the size of a group. This has been clearly demonstrated in early project meetings with plenary sessions at Upper/Lower Ping basin and individual sub-basin levels, as well as with smaller working groups, and even smaller informal discussions. Different people feel more or less comfortable at these different scales, as reflected in who speaks, how they speak, and what they say. This, in turn, strongly influences their perceptions of the degree to which they have been able to participate. Of course, participation is also influenced by familiarity and a wide variety of other social factors, and even the venue and facilities where interaction takes place.

As a 'rule of thumb', it would probably be best if the main decision-making body or 'assembly' of the RSBO could be limited to a size of about 20-50 representatives, depending on needs for representation and balance. While there is no 'magic' number, smaller groups are likely to function more efficiently and effectively. The central challenge, then, is how to keep the core assembly

membership as small as possible, while also achieving the types of balance discussed in the previous section.

Of course, this does not mean to imply that all RSBO activities need to be conducted at the full RSBO assembly scale. As is normal practice in most such organizations, one would expect that the assembly would appoint various working groups or sub-committees to conduct detailed activities and report their findings and recommendations back to the full assembly for overall consideration and decisions as appropriate.

(c) Selection processes

Another factor that is likely to have very strong influence on perceptions of representational balance, ownership and participation in an organization such as an RSBO is the process through which representatives are selected. One of the several very interesting summary observations made by Dr. Apichart regarding development of river basin organizations in Thailand during earlier years [Anukularmphai 2004a], was that as stakeholders began to become more engaged in these activities, they also began to question not only the roles of various stakeholders, but also the degree to which they represented the real views of the constituencies they were supposed to represent. While most stakeholder groups wanted some transparent and participatory process for selecting their representative, he also notes that some groups preferred some form of election process, while others were more comfortable with consensus-type processes.

For stakeholders from government agencies, another set of considerations will most likely be needed. For central agencies, given the nature of their sub-culture, it is probably unlikely that most would accept a representative who is not at least an official within their department. And in some departments, it would have to be within their division or other sub-unit. Even if they are based within the area, differences can still be associated with their being based at the regional, provincial or district level. At provincial levels, issues can arise in sub-basins that span the borders between multiple provinces, as we have heard from the Lower Ping. In many cases these concerns expressed by government agencies are really related to personal or factional rivalries among officials at various levels within or between agencies, which are often not seen or understood by outsiders. While it is fairly unlikely that it will be possible for the full range of government agencies potentially relevant to sub-basin activities to have their own full representation, most sub-basins will probably want to avoid representation by only one or a few narrow agencies. Thus, sub-basin groups may need to consider particular individuals who are likely to be able to coordinate among some set of agencies, or to allocate a specific number of positions to a group or range of agencies and ask them to work it out themselves according to their own protocols and processes.

A relatively new set of stakeholder groups now present in many areas revolve around agency-induced groups, some of which have relatively formal membership, and others of which involve an loose entourage of people associated with a "volunteer" position, such as a "soil doctor" (*maw din*) an environmental volunteer, or a village health worker. Similar situations can arise when there are members of the village who are closely associated with an NGO or other type of outside group. These groups are likely to already have their social structures in place and will be able to select their own representative, unless there are rivals competing for group leadership. There is sometimes a tendency, however, for people who are using these positions to help build their social standing to want to try to speak for a larger group than they actually represent, and to echo the views of the organizations or agencies with whom they are associated and from whom they have received training and likely other benefits. Their presence in the "chemistry" of a sub-basin assembly can actually have a very positive effect, because of their ability to argue the point of view of the outside agency or organization in the context of their also being a member of the community, rather than an outsider. Problems are likely to arise, however, if they are allowed to dominate organizational processes. Thus, for these groups there is likely to be a problem not so much with the selection process as in the need for enough diversity to insure checks and balances.

Perhaps one of the most ideal situations is where relevant local networks have already emerged and have found ways to deal with representation among the internal elements of their constituencies. Known examples can include either *tambon*-centered or small sub-watershed-centered networks. These can, again be considered as building-block units that are capable of forwarding their own representative in whatever way they see fit. There can be some confidence in this approach where the nature of the network is such that it will fall apart if leaders or representatives do not respond to or represent the needs of their constituencies. Even in this case, however, there will likely need to be some positions where those who do not subscribe to networks and their interests or views, have a chance to help select other representatives, through local elections or other types of processes.

Thus, probably the most difficult aspect is likely to arise from components of the sub-basin population who are not already part of the entourage of an organized interest group, and who will thus find it more difficult to have their views represented. Some of these potential groups can be large, such as various types of agricultural interests, or women or children, for example. Others can be quite few in number, but particularly vulnerable to negative impacts on their livelihoods or well being resulting from sub-basin management activities. Still others may be few in number but very powerful and skeptical of sub-basin management processes, such as local businessmen, wealthy investors, absentee landlords, or others. For cases where groups are small, it is more likely that they will be able to reach a consensus on who would be most appropriate to represent their interests. But where groups are large, with diverse points of view, and/or where they have factions or rivalries among their leaders, some type of more formal but open and transparent process of voting may be necessary.

Thus, experience indicates that selection processes will need to consider identification of various types of local context-specific stakeholder constituencies, in which selection processes can be established that are most compatible with group perceptions of equity and appropriateness. A single 'blueprint' approach is unlikely to be satisfactory, so flexibility for localization of these processes needs to be preserved. In any event, however, representatives need to be downwardly accountable to the constituency groups that selected them, so that fixed terms for re-selection and other suitable mechanisms (possibly including recall-type procedures) need to be identified and established to assure that this occurs. Since more detailed assessments or outside assistance needs to be context-specific, further support from outside needs to involve interactive and on-site processes.

3. Leadership

Leadership will be another key element that will influence perceptions of identity and ownership, as well as the practical functionality, quality, and pace of the RSBO and its activities. This is strongly echoed by international experience. While many of the most important characteristics of leadership are associated with personal traits, there are also pressures to define the institutional pool from which leaders can be selected, or even to link leadership positions with status or position within associated institutions. Various government agencies and officials, for example, feel that various leadership positions need to be earmarked for someone from their agency or at least a government official, and preferably one associated with their ministry. Others feel it is appropriate for someone assigned to a particular agency position to automatically assume an RSBO leadership position. The converse of this approach may occur when stakeholder groups outside government circles want to exclude consideration of government officials (or other stakeholder groups) from holding the leadership position.

However, many stakeholder groups – in both government and non-government circles – also recognize the central importance of individual leadership qualities and characteristics. This is inferred by Dr. Apichart's comments about how early progress at the Upper Ping/Lower Ping levels began to accelerate as individual leaders began stepping forward to play active roles in the consultative workshops and processes they were tying to conduct [Anukularmphai 2004a]. Moreover, ONEP leadership and senior staff from several agencies have also expressed their willingness to open top RSBO leadership positions for selection through elective or consensus processes within sub-basins. Their only reservation has been that some of the secretariat-type positions may need to be reserved

for agency staff who can provide appropriate technical assistance and capacity building support, at least until RSBOs reach a point in their development that they can provide these functions from other sources.

Effective open election or consensus processes for selecting RSBO leadership can also help build stronger cohesion among the assembly of representatives. In the case of elections where numerous factions exist, sometimes this process can be further encouraged by setting the standard for election higher than a mere plurality of voters. At the same time, close attention may also need to be paid to assure that elections are not divisive so that one alliance of factions can effectively capture the organization, and thus exclude the views and interests of others. This is one reason why some groups prefer processes that can result in a consensus whenever possible.

It is also important to note that, as Dr. Apichart has mentioned, there are already various capable and promising people who have stepped forward to assume leadership roles in predecessor activities to this project. ONEP and project staff are familiar with many of these people and have made efforts to include them in project events and activities. If establishment of more long-term RSBO arrangements entails new processes for selecting its leaders, some special effort should be made to make the reasons for this process clear to these people, so that they will be encouraged to be candidates if they so desire, and that the process does not reflect dissatisfaction regarding their previous work.

4. Institutional positioning and linkages

As we have seen in previous sections, RSBOs will need to develop various types of linkages with different types of organizations at levels that are both above and below the sub-basin level in organizational and natural resource hierarchies.[23] Perhaps one of the simplest ways to think of these linkages is to distinguish between two types: primary vertical linkages associated with subsidiarity and accountability, and primary horizontal linkages associated with alliances or coalitions.

(a) Subsidiarity and accountability (vertical) linkages

Subsidiarity. As introduced earlier[24], the principle of subsidiarity seeks to locate decision-making at the most local level where it is possible and effective. For RSBO's, this would mean that they would look to more local levels contained within their domain as the primary source for ideas, initiatives, and actions. Assuming households and villages are at the most local level, intermediate levels still more local than the RSBO would include local governments (TAO, *tessaban*), the district level of local administration, and civil society groups and organizations with membership and interests at smaller that sub-basin levels, and especially local sub-watershed management networks. Thus, in relationship with these more local levels, the RSBO would seek to address issues that more local levels find difficult or impossible to address by themselves, and to assess and address issues that only emerge at the broader sub-basin level.

On the other hand, the sub-basin level is the most local level of hierarchies that include larger 'sub-basins' (*e.g*. Upper Ping / Lower Ping), provinces, river basins (*e.g*. entire Ping), regions, river systems (*e.g*. Chao Phraya), and national levels. Within this context, the RSBO needs to be seen as a primary source of ideas, initiatives and activities at the sub-basin level, which would be at the component building block level of efforts to address legitimate concerns that emerge at, or are best managed by, these broader components of society and its natural resources. The RSBO would also view higher levels as a venue to which they could pass issues that it finds difficult or impossible to address within its own jurisdictional domain.

Accountability. While resource governance-related organizations at these various levels need to have sufficient recognition, authority, and resources to take the initiative on issues that are best addressed at their level, good governance also requires that they be accountable for their actions.

[23] Sections I.B.3 and I.B.4 identify and discuss the relative positioning of sub-basins in these hierarchies.
[24] Section III.A.3.

Thus, RSBOs need to be accountable to levels both below and above their position in these hierarchies. Accountability requires mechanisms and tools that can provide real incentives and disincentives to help assure appropriate behavior.

Under current conditions, incentives for upward accountability to higher-level organizations relate closely to access to authority and funds derived from central sources. Downward accountability to lower levels relates primarily to the degree to which local constituencies can determine participation in the RSBO, both in terms of representation and the rules of the game. While higher-level authorities can withdraw funds or recognition, lower level groups can change members (if they have the authority) or withdraw local legitimacy through non-participation, non-compliance, boycott or active opposition. To the extent that implementation activities would be channeled through central agencies, provincial local administration, or local government, any of them could also withdraw support and any matching funds or other resources they are requested to provide – provision of such support is also a positive incentive for behavior seen as acceptable. Some groups may also be able to access auxiliary channels for seeking incentives or resolving disputes, such as through political organizations and hierarchies that are able to influence behavior at other levels.

(b) Alliances and coalitions (horizontal) linkages

It will also be useful, and at least for some issues important, for RSBOs to establish linkages with other organizations at or near the same level of institutional and natural resources hierarchies. As these would be essentially peer-to-peer types of relationships, they are conceived more as alliances or coalitions among organizations that share similar types and levels of concern.

Within the RBO framework, the most obvious type of horizontal linkage would be with other RSBOs. Since this current project focuses on pilot organizations in three of the 20 official sub-basins of the Ping River Basin, it will not yet have an opportunity to deal with dynamics that will occur at the river basin level once all sub-basins have functional RSBOs in place. Once this occurs, however, there should be an increase in sub-basin-to-sub-basin exchange. This is likely to result in the emergence of some degree of alliance formation among sub-basins with relatively similar characteristics and interests. Land use insecurity in forest lands and associated inability of local governments to establish local tax bases might be one possibility, concern about industrial water pollution might be another, and many more possibilities are conceivable. Insofar as these relate to upstream-downstream issues at river basin level (Upper/Lower Ping or entire Ping), negotiations among groupings of sub-basins may emerge. In another dimension, we might also see groupings of sub-basins wanting to focus on similar types of capacity building or public education lines of activity, or even groupings wherein RSBOs with greater capacity seek to help develop capacity of weaker ones. Many forms are possible, and such alliances may be short, medium or long-term in nature, and relatively focused or broad in scope. Relevance and appropriateness should determine the pathway, and flexibility should be substantial.

As a second type of linkage, RSBOs could also seek to facilitate building of horizontal alliances or coalitions among various types of organizations within their sub-basin. Participation by district administrations, local governments, civil society networks and groups, and local business operations and interests could be sought, as well as by units of central agencies based in or responsible for areas of the sub-basin. Even within various of these sector groupings, RSBOs could seek to facilitate alliances through which relevant issues are assessed, discussed and negotiated, including the manner in which their interests can be best represented in RSBO processes and negotiations. Emerging higher-level civil society networks could play a major role in such efforts in sub-basins where they are active, including direct collaboration with RSBOs.

A third type of linkages may involve support for building alliances or coalitions among similar types of groups, and/or groups with similar types of concerns, which cross sub-basin boundaries. Some of these groupings may already exist, such as the association of TAO in Chiang Mai province, for example, and may well be able to help assist with RSBO-related issues or activities.

Given this substantial range of promising directions for building alliances and coalitions, RSBOs may well want to consider where the comparative strengths of their own operations lie, and where they should seek to build partnerships with institutions that may be more advanced and capable of conducting various types of activities. Indeed, they may even want to seek assistance from RBO or other types of organizations at higher levels to help facilitate emergence or extension of civil society or other types of groups with special capacities to play prominent partnership roles in multiple sub-basins.

5. Legal status

There has already been considerable discussion under this project regarding the preferred legal status for RSBOs. While various parties appear to have their clear preferences, there are in principle a variety of options that could be adopted.

One option about which there has been little discussion, is for RSBOs to simply be organizational sub-units under a River Basin Organization and thus assume the same legal status as its parent organization. While this might simplify the overall procedures for establishing RSBOs, it would only pass to another level the question of legal status, which would then be raised regarding the RBO. Moreover, the uniformity this would impose on all RSBOs would undermine efforts to encourage self-determination, and decrease flexibility for local adaptation.

In any event, if we assume that each RSBO would have its own legal status, at least in principle, there would appear to be several options. The organization could be:

- Operational unit that is a direct extension of an agency domain, and remains under the official authority of a ministry. This type of unit would presumably be subject to all relevant general government and ministerial regulations and procedures. It would thus need to function in a manner similar to other government agencies, most probably as an analogue to a regional office of a central agency, or a unit similar to a national park. Non-ministry stakeholders would probably have a status of advisors, and official planning and budgets would follow normal procedures.
- Separate government agency authorized to coordinate with other agencies and outside organizations. This type of unit would be quite similar, but would need an institutional location within the central government that would allow it to have official linkages with multiple ministries. This option has been used at the RBO level in some other countries. Given the government coordination difficulties in the Thailand case, it is difficult to see where it could be located other than under the Prime Minister's Office. And even then, history indicates its ability to function effectively would in no means be a foregone conclusion.
- Committee established under the authority of a provincial governor. This type of unit would rely on the coordination mandate of the provincial governor and the local administration system to bring together multiple ministries and non-governmental groups and interests. Sub-basins with portions of their area in different provinces would need to seek arrangements that could be mirrored and matched in each province. This is the approach that appears to be most commonly proposed and used to establish the initial sub-basin committees.
- Semi-independent commission or authority. While this is a less common practice that would probably involve a quite elaborate establishment process in the case of Thailand, it is a form of organization that has been used at the RBO level in several countries. Although constrained to follow various basic government procedures, this type of organization could have considerably more flexibility and greater engagement with non-governmental groups and interests, depending on the terms specified in its establishment.
- Independent semi-formal organization recognized through registration under one or more specific ministries. This might be a relatively easily implemented option that has been used in the past by various ministries. While it can be rapid, simple and relatively flexible, one of its major limitations is its lack of recognition and legitimacy in relationships other than with the ministries under which it is registered and recognized.

- Legally independent non-profit association or foundation. This option would make the organization a legally registered and recognized juristic entity (*nittibukon*) that can, among other things, engage in legal contracts and be sued in a court of law. It would become, in essence a formal NGO (although that term commonly has a more narrow definition in Thailand).
- Informal network of local government and civil society institutions. This informal network option would mean the organization would remain at the informal civil society level, although it might be able to become recognized as a *prachakhom* organization by local government institutions in the sub-basin.[25]

Another option employed in some cases elsewhere in the world, is where RBOs have been established as semi-private or private companies or corporations. This option is usually associated with situations where the company operates income generating infrastructure or services (most often associated with hydropower, irrigation, or water supply), and where the government may hold some degree of ownership or stock. Since no such activities have been proposed thus far for RSBOs in Thailand, this option is not explored further in this report. If such operations became part of plans in the future, however, this type of company or parastatal enterprise might also be considered.

Juristic identity

A significant point of discussion and debate as this project has been unfolding is whether and when RSBOs should register as juristic entities (*nittibukon*). As seen in the listing above, in Thailand this usually implies official registration as an association, a foundation or a private company or corporation. In this respect, TAO are both elected local governments and juristic entities, but such status is derived from special legislation passed by Parliament that provides for their establishment and enhanced functions. Thus, if RSBOs are to be registered under existing legal provisions, we must assume that their choices are limited to the usual legal options.

Major positive impacts of becoming a juristic entity that are frequently mentioned include: (1) both perceived and legal independence from any parent or patron institution or organization; (2) ability to enter into legal agreements; (3) accountability through the regular legal system; and (4) accessibility to a range of funding sources.

Some of the potential negative aspects of becoming a juristic entity that sometimes enter into the opposite sides of these discussions include: (1) more formal structures and rules may decrease organizational flexibility and advantages of informal communications and relationships; (2) it may increase perceptions that the RSBO is seeking to compete with TAOs, *tessaban* or provinces regarding mandates, jurisdictions, duties, power, and/or budgets; (3) there may be legal problems regarding the authority of RSBOs if there are needs for them to engage in regulation and enforcement activities; (4) it is not clear whether they would be legally able to receive regular budgets from central government sources, as some have said they would like to see, or whether they would be limited to grants through processes similar to other NGOs; (5) it is not clear what tax implications there may be for various types of activities in which they may engage. Specialized legal counsel may be able to answer some of these questions.

In short, there appears to be no ‘magic’ associated with juristic entity status, and there may be some trade-offs involved. In principle, juristic entity status may appear to be most desirable for RSBOs organized along the lines of multi-level and/or cross-sector partnerships (such as models 2, 3 and 4 in section III.C.), whereas there the advantages for RSBOs associated more strongly with central government agencies (such as models 1 and 2 section III.C.) are much less clear.

[25] See section II.B.2.(h) for discussion of these types of institutions and arrangements

6. Operational components and specialists

RSBOs must also consider the types of operational component sub-units that the organization should have, and the types of specialist skills that will be required for them to function properly. Given the large variation in conditions among Ping River sub-basins, a standard one-size-fits-all type of blueprint approach appears to be very inappropriate. It is also inappropriate in principle to seek to impose a particular structure on a 'participatory' organization. There are, however, at least three basic types of components that RSBOs need to consider:

(a) RSBO assembly.

This would be the main plenary body where the full range of representatives in the sub-basin conducts overall deliberations and decision-making processes. Whether it is called an assembly, an association, a commission, a committee or something else is not important, although it may be desirable to have some degree of consistency in terminology among sub-basins. Major issues regarding its membership and the manner in which they are selected were discussed above under representation.[26]

(b) Working groups.

In most all cases, RSBO assemblies will likely need to establish working groups or sub-committees to focus on individual issues and/or types of activity. Some of these may be 'standing' or relatively permanent working groups that conduct activities that are necessary on an on-going or periodic basis over long periods of time. Others may be 'ad hoc' or more temporary working groups that are organized to address a specific issue or task, and they can be disbanded when the issue is resolved or task is accomplished. Establishment and membership of both types of working groups should be deliberated and approved by the RSBO assembly, which should be the source of authority and mandate of the working group.

In terms of permanent working groups, we have already noted that at the Upper Ping and Lower Ping levels there are currently three working groups focused on (1) planning (2) data and information, and (3) public relations and awareness. Dr. Apichart has noted how participation and local initiative increased after working groups were established, which underscores the importance of these working groups, as well as the need for them to have capable and motivated leaders and staff, along with the resources required for them to conduct effective operations.

The types of permanent working groups at the Upper/Lower Ping level covers three important areas, although this author would prefer to rename the groups as (1) program and project planning; (2) data and information; and (3) public participation and awareness. In addition, it is strongly recommended that two additional areas be considered[27]: (4) problem identification and analysis, and (5) monitoring and learning. These are all functions that need to be considered, but each RSBO assembly should ultimately determine how they are operationally grouped and labeled in a given sub-basin, along with other functions that they may identify themselves.

In considering these issues, the RSBO assembly should also consider interests, special skills, and capacities of RSBO assembly representatives and potential staff, as well as the special interests, local knowledge and skills of individuals, groups and organizations in the sub-basin that may be well suited for forming partnerships with the RSBO in conducting some of these activities. In such cases, however, the RSBO will still need to retain a strong oversight role. In any event, the RSBO will need to identify any gaps in the mix of specialist skills needed, and develop a strategy for building appropriate capacity, or gaining access to those skills from other sources.

[26] See section III.B.2.
[27] See discussion of RSBO roles and responsibilities in section III.B.1.

(c) Secretariat.

RSBO assemblies will also most likely need to establish secretariat operations to conduct regular administrative and operational tasks that will be required for the RSBO to function smoothly, efficiently, and effectively. Administration, communications and financial management will be among the important core functions for all sub-basins, and others may be identified locally.

In addition to its core operational tasks, a second set of important secretariat functions would be to provide the operational base for activities of both permanent and temporary working groups. One obvious example would be for a permanent working group on data and information management, which will be of critical importance for many RSBO functions and will require some type of supporting technical staff and equipment infrastructure. Similarly, a group on public participation and awareness is likely to require a fixed contact point, and its own materials and equipment.

There will be an important set of decisions associated with where secretariat functions will be located and how they will be operated, and preferred outcomes are likely to vary among sub-basins. At least initially, there may well be a need for at least facilities and logistical support that may need to be provided by a unit of a central agency, local administration, or other type of organization in the sub-basin. And in the case of such support coming from a government unit, its policies or regulations may require that an official from that unit be an official member of the secretariat. While it is not recommended that any particular agency should automatically be head of the RSBO secretariat in all sub-basins, universal presence at the request of RSBOs should pose on problem. Indeed, there may be certain functional relationships that an agency could provide to RSBOs, from which such widespread acceptance would be a logical result. Such arrangements might be particularly relevant in relation to data and information systems (especially GIS, databases and electronic networking) and capacity building. Indeed, capacity building is particularly important, and concerted efforts should be made by all major stakeholder groups to help build relevant aspects of capacity in the RSBO and its working groups and secretariat.

C. Proposed Array of Organizational Alternatives for RSBOs

Given the various alternative structural options under each of the considerations discussed in the previous section, it appears there are an almost infinite number of structural variations possible for RSBOs to choose from. There are, however, some important factors that further constrain the domain of choices. Perhaps the most important ones relate to the need for some internal consistency to avoid incompatibilities among options for different dimensions of RSBO structure and function. Many such incompatibilities would most certainly lead to important problems or the demise of the organization within a short period of time, while others would sow the seeds of tension and contradiction that would at least be likely to cripple the organization over the longer term.

In order to paint a clearer picture of how various relatively internally consistent and compatible combinations can provide a set of reasonably realistic alternative scenarios for RSBO organization, this section describes five alternative organizational models that represent variations falling under three generic types. The unifying theme for distinguishing these generic types centers on identity, participation and subsidiarity issues discussed in previous sections.

Under this participatory watershed management project, it must be stakeholders within a sub-basin who decide for themselves what type of ‘model’ of organization is best for them. Thus, to help facilitate decisions by sub-basin committees and stakeholders regarding the type of RSBO they want to establish, a comparison chart of various major structural and organizational characteristics of each indicative type of model is presented in Figure 3-5. In addition to providing an overview of model types, the chart may also be useful in considering how changes in various components are associated with changes in overall orientation of alternative types of RSBOs. Indeed, the choices made in pilot sub-basins, and the similarity or differences among them, should be very informative for efforts to develop support services, and to anticipate options and needs for Ping sub-basins at the overall level.

It is important to note that many of the attributes described for each of these models could be altered or adjusted in various ways. Thus, the specific combinations chosen are meant to be indicative of a certain type of RSBO organizational model, but each can be further 'tweaked' and 'fine tuned' to improve its performance under specific conditions.

1. Government-oriented models

These two indicative models continue past trends in Thailand toward establishment of RBOs and RSBOs through central government initiative aimed primarily at improving government programs.

Type 1. Focused government model

The central focus of this model is on efficiency and effectiveness in utilizing the institutional apparatus of a single ministry to implement activities within the mandate of that ministry – in this case the Ministry of Natural Resources and Environment (MoNRE). Thus, participation under the RSBO is primarily to assist and improve the design and implementation of MoNRE programs. Major characteristics include:

- Mandate: Since this model focuses on the mandate of MoNRE, the scope of the RSBO mandate is limited primarily to issues related to water use, forest land use, various forms of pollution, and solid waste and waste disposal.
- Roles & responsibilities: The role of the RSBO is primarily to provide advice and assistance for MoNRE agencies in identifying and analyzing problems, project planning, and monitoring environmental conditions. Central agency staff conduct implementation, other types of monitoring, and any regulatory or incentive measures through their normal operational channels, but are assisted by the RSBO in public awareness and training activities.
- Main source of authority & legal identity: MoNRE provides authority for establishing the RSBO and for the various lines of activity it conducts, in a manner somewhat similar to a regional office of a central agency. It is probably not particularly necessary to seek an independent legal status.
- Representation: All relevant departments and agencies of MoNRE contribute representatives. Provincial local administrations are invited to assign representatives, including district officers, kamnan and village headmen in the sub-basin, in addition to TAO leaders. Relevant livelihood, business and/or industry representatives are nominated by heads of agency units of the ministry located in the sub-basin, and/or local administration leaders. MoNRE conducts final selection of representatives and appoints them through an official directive.
- Leadership, assistance, information: Chairman, deputy and main secretariat positions are all filled by officials from units of agencies under MoNRE. Under a lead agency approach, DNP continues to provide leadership in Upper Ping sub-basins, and DWR continues to lead work in Lower Ping sub-basins. Technical assistance and information are provided by various units of MoNRE, who are able to hire consultants or commission studies when needed.
- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on the administrative hierarchy of MoNRE. Downward linkages focus primarily on local units of agencies under MoNRE, and on district officers, kamnan and TAO leaders. Relationships with local civil society organizations are informal and under the discretion of local agency and local administration staff.
- Main funding sources: Funds come primarily from central government budget allocations to MoNRE and its relevant departments and agencies, through which allocations are made to RSBO activities. Project plans are incorporated into regular processes, and implementation flows through normal agency and TAO channels.

While in many ways this appears to be a government agency business-as-usual model, there are still several ways in which it would be an improvement over current conditions. It would, for example, require some real coordination among departments of MoNRE, in order to develop a uniform set of ministry guidelines regarding sub-basin delineations, leadership and responsibilities, a single set of sub-basin organizational arrangements, *etc*. Moreover, many of the issues related to confusion could be clarified in the context of a relatively narrow focus, and action plans could be adapted quite readily from earlier plans already produced under activities led by DWR and DNP. In comparison to other approaches, this model would be relatively quick and easy to define and organize, and it could probably be established through a ministry-level directive issued by MoNRE.

The key potential weaknesses of this model relate to its tendency to be dominated by the views and policies of a single ministry. The identity of the RSBO will likely tend to become regarded as a public relations interface for MoNRE and its agencies and associates. Emphasis will tend to be strong on water, soil and forest conservation, water use and pollution, waste and trash reduction and disposal, and any other major programs of the ministry. Remedial measures will tend to be strong in these areas, but unable to address major underlying causes that require broader consideration or action by other ministries or sectors.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by modifying arrangements to include, for example, at least some elected leaders and broader local network and civil society representation, by employing public hearings and other types of tools to enhance public participation and transparency, and/or by seeking stronger interaction with planning processes of local governments in the sub-basin regarding broader underlying issues and associated development needs.

Type 2. Broader government model

The main focus of this model is still on efficiency and effectiveness in utilizing government institutional arrangements and mechanisms, but the scope is broadened to include activities within the mandate of multiple ministries. Given the difficulties in coordination among ministries at high levels, the provincial local administration hierarchies are brought in as a partner to assist with coordination and integration of plans at more local levels. Its major characteristics include:

- Mandate: Since this model focuses on mandates of multiple ministries (MoNRE, MoPH and MoAC), the scope of the RSBO mandate includes issues related to water use, forest land use, various forms of pollution, and solid waste and waste disposal, as well as agricultural production and public health.
- Roles & responsibilities: The role of the RSBO is primarily to provide advice and assistance for agencies of MoNRE and other partner ministries in identifying and analyzing problems, project planning, and monitoring environmental conditions. Agency staff under each ministry conduct implementation and other types of monitoring, as well as any regulatory or incentive measures, through normal operational channels, and are assisted by the RSBO in conducting public awareness campaigns and training activities.
- Main source of authority & legal identity: Since this model involves multiple ministries, the highest level of authority needs to come from either a unit such as the Prime Minister's Office, or through a formal agreement among the three ministries. This is complemented by authority from provincial governors for establishing the RSBO and conducting coordination and integrated activities within each province. It may seek an independent legal status in the future if it is useful.
- Representation: All relevant departments and agencies of MoNRE and partner ministries contribute representatives. Provincial local administrations, including district officers and kamnan, are represented. Local governments are represented by TAO leaders. Relevant livelihood, business and/or industry, and civil society organization representatives are

nominated and selected by other representatives. Final appointments are by the provincial governor through an official directive.

- Leadership, assistance, information: Chairman, deputy and main secretariat positions are all filled by officials from units of agencies under MoNRE, partner ministries, or the provincial local administration. Technical assistance and information are provided by various units of MoNRE, partner ministries, local administration offices, and/or short or long-term consultants that can be hired by the RSBO or participating agencies.
- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on the administrative hierarchies of MoNRE and partner ministries, as well as any higher level office (*e.g.* PM's Office) that may be involved. These may include organizations at higher river basin levels (RBOs), which may be an intermediate level for relations with higher levels for various issues or processes. Downward linkages focus primarily on local units of agencies under MoNRE, partner ministries, and local administration officials and kamnan, as well as TAO leaders. Relationships with other local civil society organizations are informal and accountability depends on their relationships with local administrations and local government.
- Main funding sources: Funds come primarily from central government budget allocations to MoNRE and partner ministries, and perhaps to some extent provincial governors, through which support is provided for RSBO operational activities. Project plans are incorporated into regular processes, and implementation flows through normal agency and TAO channels.

Relative to the focused government model, this may be a more ambitious model to implement, but it also provides some important additional features. In addition to requiring substantially improved coordination among MoNRE policies and agencies, the model also seeks coordination among multiple ministries. As this is not likely through normal channels, the model relies on an umbrella high-level directive or cross-ministry agreement, combined with a partnership with provincial governors and local administration to help coordinate activities at sub-basin and more local levels. With broader government participation, it may be able to consider and address some more complex underlying causes and effects of sub-basin problems, and encourage more broad-based local participation.

The key potential weaknesses of this model relate to tendencies toward domination associated with its still strong links with central and provincial government. It may be difficult to attract and maintain participation by strong local leaders who want to avoid domination by officials, and local factions friendly with government officials may seek to capture control. Moreover, there may be a tendency for the RSBO to be regarded primarily as a source of government funds, resulting in local tendencies to say what they think central agencies want to hear in order to obtain funds that can help boost factional prestige and welfare.

RSBOs preferring this type of model might seek to mitigate potential weaknesses, for example, by modifying arrangements to include at least some elected leaders, by more transparency and local initiative in selecting local representatives, and by employing public hearings and other types of tools to enhance public participation and transparency. It may also want to emphasize strong interaction with planning processes of provinces and local governments in the sub-basin regarding broader underlying issues and associated development needs, both within and beyond mandates of participating ministries.

2. Multi-level partnership models

These two indicative models employ multi-level partnerships to establish the sub-basin level as the primary venue for an interface between top-down and bottom-up processes.

Type 3. Central – local partnership model

This model places its main focus on creating a real partnership among groups and organizations from central to local levels, but with a degree of asymmetry that assigns somewhat greater weight to central and provincial government agencies. Primary coordination and integration functions are shifted to provincial and local levels, and implementation plans are integrated into the regular development planning process. This reduces or eliminates needs for formal cross-ministry agreements at high levels, while expanding the range of issues available for RSBO consideration. Major characteristics include:

- Mandate: Since this model centers on a central-local partnership, its mandate can be broader than issue areas directly under the mandate of MoNRE and specific partner ministries. Thus, RSBO mandates could expand to include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or other issues of local relevance and importance for management at the sub-basin level.
- Roles and responsibilities: The role of the RSBO under this model shifts into more of a leadership mode for tasks such as identifying and analyzing problems, planning, monitoring of environmental conditions and program impacts, and conducting public awareness campaigns. Project implementation and monitoring are probably still through normal agency, local administration and local government channels, with the RSBO providing more advice to improve implementation operations and monitoring, and assisting with training activities. It may also be possible for the RSBO to have a stronger implementation role and directly receive funds that it manages and allocates among partner institutions, local governments and civil society groups and networks. In any event, the RSBO takes a leading role in monitoring environmental conditions and program impact, with assistance from its various stakeholder groups.
- Main source of authority & legal identity: There are multiple sources of authority that include MoNRE and other participating ministries, provinces and their local administrations, and local governments in the sub-basin. RSBO establishment is under the authority of provincial governors. It may well want to seek a more independent legal status whenever members feel it is appropriate and useful, but it will need to consider how that may affect any regulatory roles or funding channels that are included in its operational design.
- Representation: Central ministry representation includes MoNRE and any other ministries that are seen as important for fulfilling the scope of the locally agreed upon RSBO mandate. Local administration is represented by provincial, district and kamnan levels, and local government is represented by TAO leaders or their selected representatives. Representatives of business, industry, livelihood groups, civil society and local communities are invited, and may be selected by voting or consensus in the RSBO assembly – selection of the initial set of representatives may require a larger forum or other mechanism to solicit nominations from a relatively broad base within sub-basins. There is a rough balance among governmental and local representatives.
- Leadership, assistance, information: Under this model, RSBO chairman and deputy positions are filled by the RSBO assembly through voting or consensus procedures. Secretariat positions are filled by a mix of officials designated by agency or local administration leadership, and staff selected by the RSBO assembly through voting or consensus procedures. Technical assistance and information are solicited from and provided by a wide range of

government and non-government sources, including agencies, local governments, academics, civil society organizations, and other non-governmental and private sector sources.

- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on provinces and higher-level river basin organizations (RBOs), as well as administrative hierarchies of MoNRE, other ministries that may be involved, and provincial governors. Downward linkages emphasize local governments, participating civil society organizations, and other groups represented in the RSBO assembly, as well as district administrations and local units of agencies under MoNRE and other participating ministries.
- Main funding sources: Funding for RSBO operations and activities come from a combination of sources that include budgets allocated to MoNRE and other central agencies, discretional funds under the provincial governor, and local government budgets.

This model represents efforts by MoNRE and its agencies to reach downward in administrative and natural resource hierarchies to form a real partnership with local administration, local governments, civil society and other local stakeholder groups. While the ministry and province local administration still provide a degree of leadership, this model encourages and requires much more active local participation and decision-making.

Key potential weaknesses relate to its greater complexity and needs for coordination, as well as a need for strong local leadership that can balance tendencies toward domination by government, local elites, business interests or other locally influential factions.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by seeking multi-level dialogue with partner institutions, and by seeking ways to encourage and strengthen capacity of local leaders, as well as mechanisms to assure transparency, accountability and access to information.

Type 4. Local – Central partnership model

The main focus is also on creating a real partnership among groups and organizations from central to local levels, but with a degree of asymmetry that assigns somewhat greater weight to local government and civil society groups and institutions.

- Mandate: Since this model centers on a local-central partnership, its mandate can be much broader than issue areas directly under the mandate of MoNRE and specific partner ministries. Thus, RSBO mandates expand to include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or any other issues deemed to be locally relevant and important at the sub-basin level.
- Roles and responsibilities: The role of the RSBO under this model is to provide leadership for most tasks, including identifying and analyzing problems, formulating programs and plans, and monitoring of environmental conditions and program impacts. Projects are implemented and monitored through normal agency, local administration and local government channels, but the RSBO provides both advice to and local assistance for implementation operations, and assists with project monitoring. It may also be possible for the RSBO to have a stronger implementation role and directly receive funds that it manages and allocates among partner institutions, local governments and civil society groups and networks. The RSBO takes the lead role in monitoring environmental conditions and program impact, with assistance from its various stakeholder groups, and in conducting active public awareness campaigns and public education programs.
- Main source of authority & legal identity: There are multiple sources of authority that include sub-basin local governments, provinces and their local administrations, MoNRE and its agencies, and other participating ministries, as well as from public awareness and support. Initial RSBO establishment is under the authority of provincial governors. In order to

strengthen its identity as an independent organization, it would most likely want to register as an independent juristic entity as soon as possible. In doing so, however, it will need to consider how that may affect any regulatory roles or funding channels that are included in its operational design.

- Representation: Central ministry representation includes MoNRE and any other ministries that are seen as important for fulfilling the scope of the locally delineated RSBO mandate. Local government representatives play very active roles, while local administration is represented by provincial, district and kamnan levels. Representatives of business, industry, livelihood groups, civil society and local communities may be selected by voting or consensus in the RSBO assembly, or selected by local constituent groups where they are present. Development of constituent groups or alliances at the sub-basin level is encouraged, and new groups or alliances may petition the RSBO to request representation. While governmental representatives are prominent, local representatives have at least a modest majority.
- Leadership, assistance, information: Under this model, RSBO chairman and deputy positions, as well as secretariat positions, are filled by the RSBO assembly through voting or consensus procedures. People are nominated for these positions according to their personal characteristics and standing, rather than their institutional affiliation. Technical assistance and information are solicited from and provided by a wide range of government and non-government sources, including agencies, local governments, academics, civil society organizations, and other non-governmental and private sector sources.
- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on provinces and higher-level river basin organizations (RBOs), as well as units of MoNRE and other ministries responsible for national and other relevant policies that affect sub-basin issues and activities. Downward linkages emphasize local governments, civil society networks and organizations, local communities, and other constituent groups represented in the RSBO assembly, but also include local units of agencies under MoNRE and participating ministries.
- Main funding sources: Funding for RSBO operations and activities come from a combination of sources that include local government budgets, discretional funds under provincial governors, and budgets allocated to MoNRE and other central agencies, as well as any available grants or non-governmental sources.

This model represents efforts by local governments and organizations in the sub-basin to organize themselves and reach upward in administrative and natural resource hierarchies to form a real partnership with provincial local administration, government agencies under MoNRE and other participating ministries, and any other relevant stakeholder groups. Its structure helps reduce threats of government domination, but requires strong local leadership, participation, and initiative.

Key potential weaknesses relate to its complexity, and threats of local factional domination, or stagnation if different local interests cannot negotiate effectively among themselves.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by seeking ways to strengthen the roles and capacity of local networks, civil society institutions, local government, and constituency groups, by encouraging local leadership and initiative, by strengthening negotiation and conflict management capacity, and by providing regular forums for communication among all sectors, as well as through mechanisms to assure transparency, accountability, and strong public information, education and participation programs.

3. Non-government alternative models

This indicative model views the RSBO as a further extension of bottom-up non-governmental processes.

Type 5. Local non-government model

The main focus is on effectiveness in mobilizing non-governmental groups and civil society institutions to formulate, advocate and monitor activities within the mandate of the RSBO. Its major characteristics include:

- Mandate: Since this is a non-governmental model, its mandate is very flexible and can be much broader than issue areas directly under the mandate of any set of ministries. Thus, RSBO mandates can include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or any other issues deemed to be locally relevant and important at the sub-basin level, and they can be re-grouped and repackaged according to local analyses and needs.
- Roles and responsibilities: The role of the RSBO under this model is to provide leadership especially for identifying and analyzing problems, and for monitoring project and program impacts. While they can also provide leadership for program and project planning, they can only propose and advise that their plans are adopted by local governments and/or central agencies and their ministries. They can also serve as advisors for implementation projects under normal agency, local administration and local government channels, including monitoring. The RSBO takes an advisory or assistance role in monitoring environmental conditions, with assistance from its various stakeholder groups. The RSBO places very strong relative emphasis on public awareness and public education, as well as on mobilization campaigns to place constructive pressure on politicians and government agencies to improve their programs.
- Main sources of authority & legal identity: Given its non-governmental orientation, the main sources of its authority are less formal than other models. Much of its authority is determined by the degree to which it is recognized as a relevant civil society *prachakhom* institution by sub-basin TAOs, and can thus act as an advisor to local government. Its other primary source of authority comes from popular support through its public awareness, public education, and mobilization campaigns, and resulting political influence through electoral processes. Initial RSBO establishment is as an informal network, but it may seek to evolve into a more independent legally registered non-government entity in the future.
- Representation: RSBO membership centers on representatives of civil society, livelihood groups, business, industry, and local communities that may be selected by voting or consensus in the RSBO assembly, or selected by local constituent groups where they are present. Development of constituent groups or alliances at the sub-basin level is encouraged, and new groups or alliances may petition the RSBO to request representation. Central ministry, local administration, and local government representation is through advisors invited by the RSBO assembly.
- Leadership, assistance, information: Under this model, RSBO chairman and deputy positions, as well as secretariat positions, are filled by the RSBO assembly through voting or consensus procedures. Chairman and deputy positions are limited, however, to those who are not government officials. Technical assistance and information are solicited from and provided by local governments, as well as academics, civil society organizations, and other non-governmental and private sector sources. Information, data, and training assistance are also solicited from local administration and relevant government agencies, but access is often limited to what is available to the general public.
- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on higher-level river basin organizations (RBOs). Downward linkages emphasize civil

society networks and organizations, local communities, local governments and other constituent groups represented in the RSBO assembly.

- Main funding sources: Since regular funding for RSBO operations and activities from government sources are extremely limited, support is primarily from local governments through their *prachakhom* status, grants from various government or non-government organizations (usually on a project-type basis), and any other available non-governmental sources.

This model represents efforts by local non-governmental groups and organizations in the sub-basin to lead efforts to organize themselves into an independent RSBO outside the government sphere, in order to conduct independent analyses, program planning and monitoring activities that seek to provide advice and some assistance to local governments, provincial administrations, and central agencies, as well as strong efforts to raise public awareness and mobilize public support and pressure for integrating improvements into all relevant decisions made in the public policy arena. Its strengths relate to its independence, flexibility, and strong grounding in local communities and conditions, and its access to information, advice and assistance from a wide range of non-governmental and academic sources. Similar models have sometimes been applied internationally, such as in the Fraser River Basin in Canada where strong issues between the government and Native American communities made it the option most acceptable to all stakeholders [Calbick 2004, Blomquist 2005f].

Key potential weaknesses relate to the absence of formal links with government organizations, which may result in weakened ability to influence develop planning processes, less access to government information, less ability to interact constructively with higher policy levels representing wider stakeholder interests beyond the sub-basin, and less access to basic support to sustain its operations over the long term.

RSBOs preferring this type of model could seek to mitigate potential weaknesses by upgrading roles for at least local governments, by building mechanisms to assure regular constructive interaction with relevant government institutions and agencies at multiple levels, by registering with ministry funding programs for NGOs and peoples organizations, as well as by seeking clear *prachakhom* recognition by all TAOs and *tessaban* in the sub-basin. The RSBO secretariat may also want to include a unit responsible for exploring a wide range of possible funding sources.

Figure 3-5. Comparison chart of five indicative alternative models for sub-basin organization.

	Focused Government	Broader Government	Central-Local Partners	Local-Central Partners	Local Non-Government
Scope of Mandate					
water use	X	X	X	X	X
forest land use	X	X	X	X	X
agriculture land use		X	X	X	X
pollution	X	X	X	X	X
solid waste / trash	X	X	X	X	X
health		X	X	X	X
education			X	X	X
infrastructure			X	X	X
livelihoods			X	X	X
Duties					
identify & analyze problems	advice/assistance	advice/assistance	lead	lead	lead
planning	advice/assistance	advice/assistance	lead	lead	lead / advise
implementation		advise	advise	advise / assist	advise
implementation monitoring		advise	advise	assist	advise
environmental monitoring	advice/assistance	advice/assistance	lead	lead	advise / assist
impact monitoring		advise	lead	lead	lead / assist
Main authority sources	ministry	ministries - prov	min - prov - TAOs	TAOs - prov - min - public	TAOs advisor / public awareness
Representation					
ministries	MoNRE agencies	MoNRE, agric, health	MoNRE, other relevant	MoNRE, other relevant	invited advisors
province / district	Prov - Dist Officers	Prov - Dist Off-Kamnan	Prov - Dist Off-Kamnan	Prov - Dist Off-Kamnan	invited advisors
local government	TAOs, Kamnan	TAOs	TAOs	TAOs	invited advisors
business / industry	selected	selected	invited / voted	voted / group-selected	voted / group-selected
livelihood groups	selected	selected	invited / voted	voted / group-selected	voted / group-selected
civil society	<informal>	selected	invited / voted	voted / group-selected	voted / group-selected
local communities	selected PYB	selected	invited / voted	voted / group-selected	voted / group-selected
Leadership					
chairman / deputies	Officials	Officials	voted	voted	voted local non-gov
Secretariat	Officials	Officials	officials / voted	voted	voted
Technical info/advice	Officials	Officials / consult	offic / acad / priv / non-gov	offic / acad / priv / non-gov	gov / acad / priv / non-gov
Primary Linkages					
Upward	Ministry	PingRB / Ministries	PingRB / Prov / Min	PingRB / Prov / Min	PingRB
Downward	Min units / District	Districts / TAOs	District / TAOs	TAOs / Networks / groups	Networks / groups
Main funding sources	MoNRE	Ministries	Min / Prov / TAOs	TAOs / Prov / Min / non-gov	TAOs / grants / non-gov

D. Proposed Process for Developing RSBOs in Pilot Sub-Basins

This section seeks to place decisions related to establishing and developing long-term RSBOs in pilot sub-basins in the context of five general development phases. This sequence of phases has already begun, and will extend far beyond the timeframe of this project. International experience confirms that development of effective long-term river basin organizations is a long-term process. Thus, expectations about the contributions that a project such as this one can make to RSBO development in Ping sub-basins need to be realistic, and they need to be formulated and assessed within this longer-term framework.

Sequential Phases in RSBO Development

The five phases of RSBO development proposed in this section are based on a range of assessments from international literature, much of which is listed in the bibliography. But they are also constructed in a manner that reflects the particular circumstances faced by this project in the context of current conditions in the Ping Basin, as discussed in previous sections of this report. The five phases of RSBO development proposed for this project are listed in Figure 3-6.

Figure 3-6. Phases of Ping RSBO Development

1. Getting started
   - Preliminary sub-basin committees
   - Initial action planning process
2. Establishing long-term organization and processes
   - Review initial planning experience
   - Select, localize and establish long-term RSBO organizational model
3. Launching implementation in a River Basin Management framework
   - Outline initial long-term River Basin management plan
   - Begin implementation and monitoring
   - Begin systematic capacity building
   - Build parallel Ping Basin – level support capacities
4. Strengthening long-term management planning and learning processes
   - Management plan elaboration, refinement and consensus building
   - Annual progress reviews, learning and adjustments
5. Maintaining long-term organizational relevance, vitality &performance

In theory, and for many river basins in practice, efforts to establish and develop river basin organizations seek to move through a logical process of analysis, consensus building, organization and planning before any implementation activities begin. In this case, however, a multi-stage process is proposed wherein an initial 'getting started' phase provides for a preliminary sub-basin committee and initial action planning process, in order to build on existing plans and locally perceived needs to begin implementation. This is followed by a second phase wherein experience from the first phase is reviewed as a basis for informing the process of selecting and establishing an organizational structure for the long term RSBO. The third phase completes the launching process for the long term RSBO by formulating an initial outline for a long-term basin management plan, and beginning implementation, monitoring, and capacity building activities. The fourth phase moves to a multi-year time frame wherein the long term management plan is carefully elaborated and refined based on the most widespread consensus possible among stakeholders, and on learning and adjustments that follow from annual reviews of progress. The fifth and final stage employs an even longer time frame, wherein the overall goals, programs, structure and functions of the RSBO are reviewed and adjusted in order to assure its continuing relevance, vitality and performance. A final section discusses factors likely to affect the time that is likely to be required during these phases.

1. Getting started

This initial phase is somewhat unusual when compared to international literature and guidelines on river basin organization development. It is proposed, however, in response to contextual conditions present in the pilot sub-basins, and indeed in all sub-basins of the Ping river basin. As explained in previous sections, this project is the most recent in a series of efforts to develop action plans for the Ping river basin. But thus far, there has been very little implementation of any of the activities and

projects that have been planned, and many have begun questioning the credibility of the overall Ping basin program. Thus, this phase is designed to mitigate some of these concerns by quickly establishing a preliminary basin committee and developing an initial action plan that seeks to build on previous plans while introducing a broader mandate, formulation of initial sub-basin goals and objectives, and articulation of initial priorities and selection criteria, which are then applied during review and screening of existing and new project proposals.

(a) Preliminary sub-basin committees

The approach of this project was to establish an initial sub-basin committee for each pilot sub-basin. A draft directive specifying membership (Figure 3-7) and major responsibilities for each committee was reviewed during initial workshops in each sub-basin. Workshop suggestions were incorporated into a final version being prepared for provincial governors to issue as a directive. Coordination issues were also explored regarding requirements in the sub-basins where more than one province is involved (Mae Kuang and Ping part 5), as well as issues raised in Ping Part 5 (Lower Ping) regarding wider agency representation. Draft directives were similar in form and format to earlier directives used to establish committees under previous planning activities.[28] Indeed, even during a further expansion phase, a convening function and authority will be necessary.

Figure 3-7. Preliminary sub-basin committees (1st draft for comment)

	Ping 1		M Kuang		Lower Ping	
DWR official					chair	1
DNP offical	chair	1	chair	1		
Province MoNRE	vice chairman	1	vice chairmen	2	vice chairmen	2
ONEP	secretary	1	secretary	1	secretary	1
Head, SB coordinating WG	secretary	1	secretary	1	secretary	1
district officer	position	5	position	7	position	8
TAO	representatives	4	representatives	8	representatives	8
local people rep	named	1	named	1	named	1
local advisors rep	named	1	named	1	named	1
NGO rep	named	1	named	1	named	1
SB witayakorn	*to be selected*	1	*to be selected*	1	*to be selected*	1
ethnic minorities	*to be selected*	4	*to be selected*	1	*to be selected*	0
teacher/respected person	*to be selected*	1	*to be selected*	2	*to be selected*	2
local farmers	*to be selected*	3	*to be selected*	2	*to be selected*	3
local industry	*to be selected*	1	*to be selected*	2	*to be selected*	2
service sector business	*to be selected*	2	*to be selected*	2	*to be selected*	2
Total number:		*28*		*33*		*34*

Although discussions and plans have varied as the project unfolded, at this point the author was told to consider preliminary committees as already established. More formal long-term RSBOs would be considered later in the project. Thus, the focus here is on long-term RSBOs to manage and further develop sub-basin programs into the future.

If the final structure of preliminary committees was reasonably similar to what is listed in Figure 3-7, it appears to be closest in form to the focused government model presented in the previous section of this report. However, its mandate is more similar to the broader government model, but without including any official coordination or representation linkages with other ministries. It also appears open to at least a modest level of civil society representation. Central agency officials are kept to a small number, but they occupy most leadership positions. Thus, it appears reasonable to consider experience under the preliminary committee to be work under a focused government model that has been somewhat modified in the direction of a broader government model. As will be seen in the next part of this report, the project finally settled on a temporary modified focused government model working group operating under the authority of ONEP until stakeholders select their own preferred type of longer-term organization. This appears to have been a reasonable compromise that could be used elsewhere.

(b) Initial action planning process

Responsibilities of preliminary sub-basin working groups include preparation of the first sub-basin action plan. The action planning process is planned to begin with articulation of sub-basin program goals and objectives, as well as criteria and priorities for selecting proposed action projects and incorporating them into short, medium and long term plans.

[28] See section I.B.1 for more information on previous governmental planning activities

Given the short time frame for this project, however, the time available for developing widespread understanding and consensus was quite limited. Thus, the project sought to develop initial action plans through a series of three sub-basin level action planning workshops. In addition, further input into the process was to be sought through workshops at district level, and possibly smaller meetings at even more local levels within each district. Projects developed under earlier DWR and DNP led planning processes were to be reviewed and considered for inclusion under these plans, as well as revised and new proposals that fit under this project's expanded mandate to consider public health and poverty-related livelihood issues. Staff of Panya Consultants were to assist a team of local co-ordinators selected from volunteers, in facilitating the action planning process at multiple levels in each sub-basin.

The project needs to recognize some of the limitations and trade-offs in this initial planning process. In principle, it would be good to start the action planning process with a relatively 'clean slate', and follow a logical process to systematically develop plans and component projects in an appropriate sequence. The reality is, however, that each sub-basin has one or more set of projects that have already been developed under previous planning processes. Those associated with these plans and projects want first consideration to be given to results of these previous efforts. Under the circumstances this seems both reasonable and quite unavoidable, especially since any alternative approach would be likely to generate negative results that would probably undermine implementation of a more theoretically desirable planning process.

Moreover, while this may be a situation where planning redundancies are unusually great, it is very highly unlikely that any sub-basin in the country does not already have various relevant projects that have already been planned. Indeed, action planning processes can build on this aspect by also seeking to review regular local development plans of TAOs in the sub-basin at the same time. This in itself could be a learning opportunity, as well as a precedent for coordinating and reconciling among local plans and planning processes.

Thus, there are four areas in which the initial action planning process needs to place particularly strong emphasis:

- Formulating initial goals, objectives, priorities, criteria. Perhaps the most important challenge for the action planning process is to attempt to quite quickly articulate goals and objectives for initial sub-basin action planning, as well as initial priorities and appropriate criteria to use in assessing and selecting projects for inclusion into initial short, medium and long term components of the action plan. While particular emphasis needs to be placed on the short term component, it will also be important to obtain at least an initial map of thinking about the medium and longer term components as well.

- Reviewing and screening existing sub-basin plans. These efforts will apply the initial criteria and priorities during review and screening processes. As they do this, they will also be seeking to establish and implement logical processes that will link proposed actions with objectives and goals, and thus make these action plans more than just an aggregation of projects.

- Reviewing and linking with TAO and provincial plans. These efforts should help to identify common interests and areas where initial sub-basin goals, objectives, and priorities may overlap with existing TAO and provincial development plans. They may also lead to discussions about what types of activities and projects might be most appropriate and effectively implemented at sub-basin or TAO levels, as well as TAO capacity building needs and the types of partnership arrangements that may be most useful and effective for both levels.

- Selecting priority initial 'demonstration' activities. In order to maximize the learning that can be derived from the initial action plan developed during this first phase, it is also proposed that selection of activities and projects for inclusion in the action plan place considerable emphasis on 'demonstration' projects. This term is meant to include projects that will either test some commonly held beliefs about means for achieving sub-basin objectives and goals, or projects that will demonstrate the potential of innovative ideas about which there is still considerable local skepticism. By including these types of projects, the sub-basin working

groups can gain experience with negotiations associated with them, and they will make good targets for developing monitoring systems that can check in a transparent manner whether claims of their proponents are justified. Similarly, appropriate studies of complex or particularly difficult issues could also be part of these demonstration activities.

Although it would be challenging to achieve these objectives during the short period of time available under this project, Panya staff and their local facilitation teams were expected to invest a great deal of effort into doing the best job they can do within these constraints. It is important to try to complete the initial action plan so that it can be submitted for funding consideration as quickly as possible. In addition, it may be useful for project staff to view the action planning process conducted under the preliminary sub-basin working group structure as producing outputs that will then feed into processes to consider and establish a long term RSBO that will manage and refine the full appropriate range of sub-basin activities from that point forward.

2. Establishing long-term organization and processes

Once the flurry of activity required during the first phase is completed, it will become time for sub-basin stakeholders to reflect on and learn from their experience in order to establish an improved organizational framework for a long-term sub-basin management organization. If sub-basin stakeholders are fairly satisfied with initial arrangements, or if they are reasonably united in their views about how they should be modified, this phase could be quite brief. In any event, we have hoped that as much as possible could be accomplished within the short time frame of this current project.

(a) Review initial planning experience

Some stakeholders may suspect that preliminary sub-basin working groups and initial action plans may pre-empt some important considerations and decisions regarding the nature and design of RSBOs and their programs in pilot sub-basins. Some may even claim it makes any further efforts to consider RSBO structure, function and planning unnecessary. It can also be argued, however, that preliminary working group and action plans will give a range of sub-basin stakeholders experience in trying to develop more systematic planning processes under a somewhat expanded mandate, which could provide them with more experience, understanding and insight that may be valuable in selecting and adapting the most appropriate type of long-term RSBO arrangements for conditions in their sub-basin.

Thus, the first task during this phase is to review sub-basin experience with conducting initial action planning processes under the organization provided by the preliminary watershed working group structure. In conducting this review, sub-basin stakeholders may wish to bring some additional representation into their discussions, perhaps including elements in the sub-basin who may have expressed any dissatisfaction with the initial committee structure or the action planning processes, and they may also wish to seek assistance from a facilitator from outside the sub-basin. The review should include consideration of experience related to the structural considerations discussed in III.B, relative to the range of model options presented in section III.C of this report. The main questions here are whether sub-basin stakeholders feel there are ways in which the mandate, structure and/or function of a long-term RSBO may need to differ from the initial phase.

(b) Select, localize and establish long-term RSBO organizational model

Based on the foregoing review of first phase experience, it will now be time for sub-basin stakeholders to select, localize and establish their desired RSBO organizational model, including its registration as a juristic entity if desired at this point.

Experience with the preliminary sub-basin working group that is similar to a modified type 1 model could help underscore the importance of two factors about the indicative alternative models proposed in this report. First, the indicative models seek to describe an array of possibilities for RSBO configuration, so that experience with one model can help them see more clearly how the other models differ or are similar. Second, as their experience under this process will indicate, components of any one of the models can be modified in many different ways, and RSBOs should feel

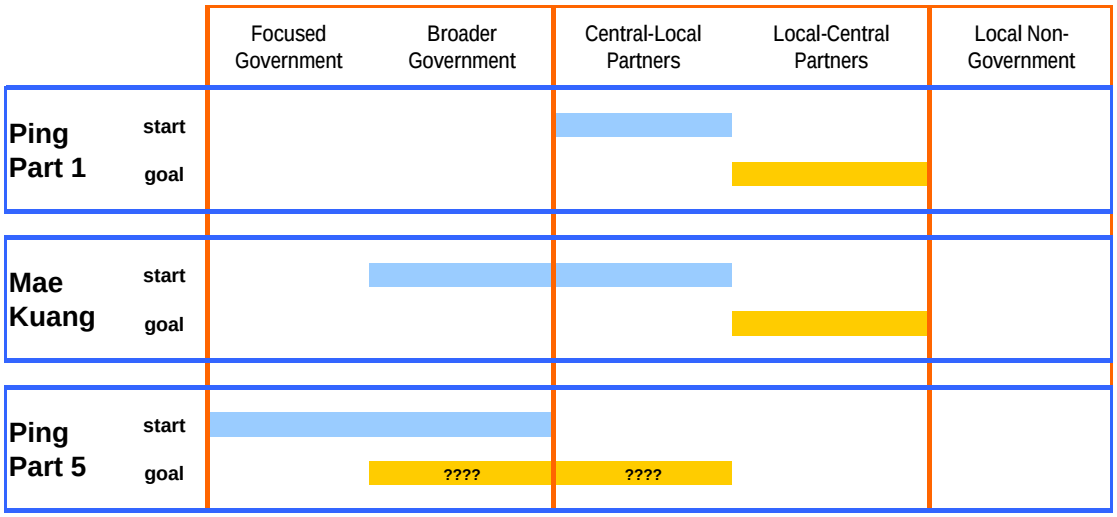
free to experiment with refinements they believe will improve their performance under specific and changing conditions within their domain. Moreover, experience with this two stage process can also help point out that RSBO configurations can be dynamic over time, and configurations can change along with perceptions, needs, capacities and conditions.

Comparison of modified RSBO configurations with the array of indicative models in this report may also help alert RSBOs to various issues and/or contradictions that may need to receive special attention in order to avoid new problems. One example has already been seen in comparing the draft preliminary committee structure, where the mandate was broadened to include issues under ministries outside of MoNRE, but those ministries have no representation or coordination agreements. Participants in the Lower Ping workshop that reviewed the draft already noticed this issue.

In any event, preliminary sub-basin working groups, augmented by appropriate additional stakeholders if necessary, should open their minds to consideration of at least the full range of alternative RSBO possibilities proposed in this report. Moreover, they can also consider both what is practical for them now and in the near term, as well as the type of organization toward which they would like to evolve over time, and the types of capacities and requirements that would entail.

During sub-basin efforts to select, modify and localize a suitable organizational model, we should also not be surprised if the three pilot sub-basins – and other sub-basins in the future – decide on different preferred configurations for their RSBO. Based on discussions at early project workshops, for example, we might speculate – as indicated in Figure 3-8 – that:

Figure 3-8. Possible starting points and trajectories in pilot sub-basins (speculative)



- In the Ping part 1 sub-basin, informal networks among local governments and civil society groups are already quite advanced. A substantial range of stakeholder groups appear able to communicate rather well and have some mutual understanding of each other's positions, even on topics where they disagree. Leaders appear quite confident and have already established network relationships among local governments in the sub-basin. Thus, it would not be surprising if they choose an RSBO configuration that is more in the direction of one of the multi-level partnership models based on strong local initiative and leadership. As suggested in Figure 3-8, they may want to begin with more of a central-local partnership model, but would probably want to move to more of a local-central partnership as soon as they are confident enough in their capacity to do so.

- In the Mae Kuang sub-basin, there has also been substantial progress in developing informal linkages among local governments and civil society groups and networks. But a wide range of strong stakeholder interests are present in the sub-basin, including powerful urban, industrial, service enterprise, and private investor interests and groups, as well as a particularly poor area involving ethnic and cultural minorities. There are also some key rivalries among local leaders.

As this makes local communication, organization and negotiation initiatives quite difficult in some respects, it would not be surprising if they choose an RSBO configuration that has a somewhat stronger degree of government agency, or at least local administration involvement. As Figure 3-8 suggests, this might take the form of a central-local partnership model, or even a broader government model. Given their confidence and expressed desire for self-determination, however, it would also not be surprising if they would want to work toward a multi-level local-central partnership model as they continue to build their already considerable local capacities.

- In the case of the Lower Ping sub-basin, it appears that government initiative and management are very strong and important in the minds of most stakeholders, and that even most relevant civil society organizations are government-induced. Thus, it would not be surprising if they choose an RSBO configuration that is more in the direction of one of the government-oriented models, and perhaps one that is similar to the draft preliminary committee but with broader agency representation. Whether or how this might change over the longer term is not yet clear, but as Figure 3-8 suggests, they may well want to maintain substantial government agency leadership even if they move in the direction of a multi-level partnership model.

It bears repeating that this is mere speculation based on preliminary general impressions and discussions, and that it is highly possible that the outcome of stakeholder decisions in each sub-basin will differ somewhat, or even drastically from these hypothetical outcomes. The choice of structural options for an RSBO lies, as it should, with the stakeholders of each sub-basin. Speculation about their decision is only provided to help illustrate general principles.

3. Launching implementation in a River Basin Management framework

This phase moves into somewhat more of a multi-tasking mode, which may well extend somewhat beyond the time frame of this initial pilot project. Thus, this phase builds on experience during the first 'getting started' phase, and employs the long-term RSBO structure established during the second phase, in outlining an initial long-term river sub-basin management plan, beginning actual implementation and monitoring of activities and projects under the initial action plan, and launches systematic long-term capacity building efforts. If the RSBO was not registered as a juristic entity during phase 2, such registration may be considered during this phase.

(a) Outlining a long-term river sub-basin management plan

International experience from around the world is very consistent in claiming that effective long-term management plans need to be formulated through processes that employ extensive stakeholder participation and consensus-building processes. Moreover, such processes are almost without exception multi-year endeavors. Indeed, efforts in the Ping Basin would appear to be very ill advised to believe that the initial action plans formulated under the brief first phase of the sequence here could possibly substitute for the 'real thing' over the longer term.

Thus, given the sequence of phases proposed here for RSBO development under conditions specific to the Ping River Basin, this phase begins with providing an opportunity for the newly established long-term RSBO to develop an outline of a long-term management plan. While this outline would build on experience during the first phase, it would also refine the scope of the mandate and the planning and operational processes to be consistent with the structure and functions of the long-term RSBO established during the second phase.

The RSBO Management Plan provides a broader framework within which action plans are embedded. Figure 3-9 provides an example of the types of components that would need to be contained within the management plan. These are, of course, indicative components that are subject to modification according to local conditions and circumstances. Indeed, the partnership and capacity building component is already an addition to what is commonly included in such management plans in places like the U.S., in recognition of some of the relatively different needs, and often somewhat more difficult conditions encountered here.

- Statement of priority problems to be addressed in the management plan. Many of the major problems in pilot sub-basins have already been identified, and will be further explored and articulated during the first two development phases. Initial criteria and priorities are also developed during the first phase, while the second phase adds reconsideration of RSBO mandate, structure and function. Thus, by this point the RSBO should be in a reasonable position to make a quite clear articulation of the priority sub-basin problems that the management plan will seek to address. At least some of these problems are quite likely to include aspects about which there currently is insufficient information or understanding, and efforts to address these needs or gaps are clearly eligible for inclusion in the management plan.

Figure 3-9. Management Plan Components

RSBO Management Plan

1. Statement of priority problems to be addressed in the management plan
2. RSBO vision statement, goals and objectives
3. Action plans for achieving goals and objectives
4. Monitoring and information strategy
5. Partnership and capacity building strategy
6. Funding strategy

- RSBO vision statement, goals and objectives. Again, experience from the first phase, which was reviewed during the second phase, together with considerations made in selecting and localizing the long-term RSBO mandate, structure and functions, should put the RSBO in a good position to clearly state the basic vision of the role of the RSBO, the goals toward which it aspires, and the more specific objectives it seeks to accomplish. Objectives are likely to continue to be grouped into those for short, medium and long-term time horizons.

- Action plans for achieving goals and objectives. One or more action plans provide the logically linked specific activities and projects through which the RSBO will seek to achieve its objectives and goals. Having passed through several potentially evolutionary steps since the initial action planning process, this should be a good time to review the logic of the initial action plan, identify gaps, additional needs, and perhaps some dubious activities that do not merit pursuing further. Some RSBOs may even wish to begin formulating separate but coordinated action plans that will seek to begin steps toward addressing some of the larger and more difficult issues that underlie various problems in the sub-basin, to conduct public education campaigns and mobilize participation, or to group activities and projects that will address needs in different sectors, or that will be implemented by different partner institutions or groups.

- Monitoring and information strategy. International experience confirms that monitoring is so important for river basin management that an overall monitoring strategy needs to be a separate component of the sub-basin management plan. The strategy needs to include all three basic monitoring sub-components: (1) monitoring activity and project inputs and outputs; (2) monitoring indicators of changing conditions in the sub-basin, including criteria and means for measuring the indicators; (3) monitoring outcomes and assessing impacts of activities and projects under RSBO action plans. It also needs to map out what will be done, who will do it, how it will be done, how findings will be assessed, and how findings will feed back into RSBO learning processes. Moreover, the strategy needs to include an information component that maps out how information will be acquired, how it will be managed, and especially how it will be accessed, used and disseminated to provide a basis for learning and public education, as well as a means for helping achieve transparency and accountability. Needs for information tools, including items such as measurement technologies, spatial information or negotiation support systems, should also be incorporated into this strategy as needs are identified.

- Partnership and capacity building strategy. It should be clear by now that RSBOs will not be able to be effective or sustainable unless they develop both vertical and horizontal partnership linkages with other organizations and institutions, as discussed in previous sections of this report. In order to reduce complexity and avoid potential confusion and conflict, the partnership component of this strategy will clarify existing and desired RSBO partnerships, and designate key persons responsible for maintaining or developing the linkage mechanisms involved. Ob-

vious elements for emphasis within the sub-basin include local governments, sub-watershed networks and other relevant building block groups, but hopefully there will also be a substantial and growing number of other productive peer-to-peer, cross-sector, upward and downward partnerships that continue to emerge. The capacity building component of this strategy will map out RSBO capacity building needs and means for addressing these needs, including consideration of partners as both beneficiaries of and providers of capacity building efforts.

- Funding strategy. Basically, the previous sub-basin management plan components map out what will be done and why, how it will be done, who will do it, and what they will need to accomplish it. This strategy maps out ideas about how the funding resources can be obtained to pay for it. While there may be some special funding provided for river basin and sub-basin activities and projects during the next few years, they are not likely to be sufficient or flexible enough to meet all needs, and there is considerable uncertainty about sustainability over the longer term. While the government needs to make a clear commitment to helping sustain these efforts over the longer term, RSBOs also need to be aware of the need for them to prove themselves and establish their credibility through the strength of their performance in addressing sub-basin issues and problems. They also need to consider how they can mobilize funding from a range of sources to maintain their programs and operations over the longer term, including how many if not most of their activities and projects can be integrated into processes such as the regular development planning mechanisms of local governments and provinces.

All of these component statements, plans and strategies that contribute to the RSBO management plan are meant to be first iterations based on current views, understandings and conditions. They are expected to be subject to change as RSBOs continue to grow and evolve. Moreover, conscious efforts during the next phase to deepen participation and consensus building in the sub-basin, are designed to encourage further evolution of the management plan.

(b) Beginning implementation and monitoring

Hopefully, funding for activities and projects in the initial action plan will have been approved by the beginning of this phase, so that implementation can begin. This will undoubtedly be an important element in verifying the credibility of RSBO development efforts. And perhaps just as importantly, it will begin to make most of these rather abstract considerations come to life as real people implement concrete projects that their advocates claim will improve conditions in the sub-basin. Thus, it will also provide clear and concrete objectives for monitoring and information components to begin focusing their efforts, as well as specific needs for capacity building and partnerships. Moreover, to the extent that first phase efforts were successful in including activities and projects with demonstration value, they should begin providing real world input into sub-basin learning processes.

(c) Beginning systematic capacity building

As the initial outline of a long-term sub-basin management plan is formulated by the new long-term RSBO, activities and projects begin move into action, and monitoring and information systems begin to come online, RSBOs will need to begin implementing their capacity building strategy. While the project includes provisions to assist with some initial aspects of capacity building, as international experience indicates, this will be a high priority objective for some time to come.

What is likely to be most urgently needed is practical information, tools, training, study tours and other means to respond to the immediate practical needs of emerging RSBOs. The time for propaganda and often sanctimonious preaching of the gospel of environmentalism is rapidly passing in most sub-basins, and the time for identifying, developing, adapting and refining practical and effective approaches, methods and tools to accomplish the tasks at hand is rising. Thus, an appropriate balance between two types of practical educational materials is needed: (1) materials that provide specific and practical tools and assistance for addressing needs that are already locally perceived as important; and (2) materials that expand local horizons with new ideas and tools. Both are important, but participatory decisions about priorities would be most appropriate.

There is a specific component of this project that is focused on training and capacity building, and Panya staff working on that component have been conducting activities to assess needs in pilot sub-basins and seek information and other means for meeting those needs. In doing this, they can anticipate some of the needs related to building capacity to conduct action planning processes and other aspects of RSBO management planning, including process such as awareness raising, negotiation and conflict management. They can also anticipate capacity building needs related to various lines of activity as reflected in projects already included previous plans developed under processes led by DWR and DNP. It is probably quite safe to assume that at least most of these lines of activity will be included in initial action plans formulated under this project. They may also anticipate that some materials might be useful for increasing attention to areas where this project is expanding the RSBO mandate, with particular emphasis on aspects related to public health, poverty and livelihoods. And perhaps particular attention should also be given to various aspects of monitoring. Such anticipation, however, needs to be grounded in interaction with stakeholders in the sub-basin, in order to be consistent with the bottom-up participatory mandate of this project.

As part of these efforts, the project provides for training and development of 'tool kits' for RSBOs. It is increasingly common to use terms like 'tool kits', as in the Ramsar handbooks and case studies[29] that include topics such as river basin management, participation and water management and allocation [Ramsar 2004a, 2004b, 2004c], or the term 'toolbox' as in Global Water Partnership website[30] that provides information materials to support integrated water resources and river basin management. Indeed, the organization and basic options presented in the GWP toolbox may be useful in the process of considering models for the Ping RSBO tool kit, although the content for various component tools is at this point still rather sparse. As materials continue to be accumulated at websites such as these, some may well be worthy of translation and adaptation into Thai language and context. A few other examples of materials supporting operations of river basin and watershed management organizations are from the U.S., many of which are somewhat more developed than the global and Asian websites at this point in time. They include watershed guides accessible through the "know your watershed" website coordinated by Conservation Technology Information Center[31], and publications in the bibliography of the "watershed academy"[32] and other publications[33] of U.S. Environmental Protection Agency [*e.g.* EPA 2005, 2003a, 2003b, 1997a, 1997b]. There are also numerous other interesting examples, such as the watershed primer prepared for river basins in Pennsylvania [Novak 2000], watershed management planning publications linked to the Potomac River Basin website[34], the Center for Watershed Protection website[35], and many more that can be accessed through searches on the internet. Many also include examples of existing river basin management plans, as well as links to training materials and tools related to numerous associated topics and technologies.

There are also, of course, a substantial number of materials, training curricula, and tools that have already been developed, tested, and used by various networks, projects and organizations in Thailand that may be very relevant for RSBOs and this project. Staff of Panya Consultants have been making efforts to seek some of these out. Obvious examples include the sub-basin planning handbook that the CMU Social Research Institute developed for ONEP, which uses the Ping part 1 sub-basin as an example [ONEP 2004], as well as the handbooks for stream detectives, and other materials developed and published by the Green World Foundation – and there are many others, often of varying quality. Unfortunately, there are few, if any repositories in Thailand where such materials are systematically collected that could serve as a library or knowledge base about these matters.

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[29] http://www.ramsar.org/lib/lib_handbooks_e.htm
[30] http://gwpforum.netmasters05.netmasters.nl/en/index.html
[31] http://www.ctic.purdue.edu/KYW/
[32] http://www.epa.gov/owow/watershed/wacademy/itsannot.html
[33] http://www.epa.gov/owow/watershed/publications.html
[34] http://www.potomacriver.org/get_involved/wmp.htm
[35] http://www.cwc.org/index.html

(d) Building parallel Ping Basin – level support capacities

There will clearly be needs for information support systems, technical assistance and technical analysis, as well as education, training and other types of support systems that will need to be based at higher than sub-basin levels in the river basin hierarchy. If such facilities and services have not yet emerged in the Ping Basin, strong efforts should be made during this phase to build at least three types of RSBO support functions at the Ping Basin level:

Ping RBO Knowledge Center. Given the major information needs of the RSBO development process, and the absence of systematic collections of many of the types of information most needed, development of an RBO-level knowledge center needs to be developed to serve as:

- Library and clearinghouse for access to a wide range of relevant Thai language training curricula, materials and publications. Distribution could be through hardcopies, web-based digital forms, and links with organizations that prefer to handle distribution by themselves.
- Contact center for links with groups, organizations, agencies and individual resource persons with useful experience, tools, and local or scientific knowledge that can assist with RSBO organization, program development, implementation and capacity building, including training, demonstrations, cross-visits, study tours, and a range of additional formats.
- Center for facilitating development of appropriate forms and formats of communication and training materials that can help meet need of the full range of different types of stakeholders and interest groups in Ping sub-basins.
- Center for coordinating two-way translation and adaptation of relevant materials to facilitate information exchange at international levels, as well as with minority languages spoken within the Ping Basin.

Ping River Basin projects need to take initiative in helping establish and develop such a center for use by the pilot and other sub-basins, which can be a source of information and a model of knowledge accumulation and access for other basins and sub-basins in the future.

Mobile RSBO Technical Support Teams. Although not necessarily a large operation, a few small mobile teams could provide specific types of largely on-site technical assistance to RSBOs to help build capacity in areas where systematic on-site assistance is difficult to obtain from existing groups, organizations or institutions. Examples of topics where technical assistance could be most helpful during early phases of development include: (1) participatory analysis, learning and planning; (2) stakeholder participation, negotiation, consensus building, and public education; (3) monitoring and information management systems and technologies. Contacts, scheduling, and organizational and administrative support for mobile technical support teams could be through the Ping RBO Knowledge Center. Depending on demand, teams may include part-time staff with regular employment at partner institutions such as academic institutions, private sector businesses, or civil society organizations.

Ping RBO Data & Analytical Support System. There are also needs for some more sophisticated tools and technologies to provide support for RBO and RSBO programs and activities in the Ping Basin. Spatial information systems and analytical modeling are clearly relevant here, as well as other types of databases and analytical tools. Some of these technologies will currently be beyond the human resource and financial capacities of most RSBOs. Employing principles of subsidiarity and coalitions, the most logical location for centers of this type activity would be at appropriate regional institutions – and at least linked with major universities – that could operate facilities that could function at a river basin level, but designed and operated to be able to provide support services for RSBOs and their stakeholder groups. Their operations, information and services must be clearly and easily accessible, and at least linked with the Ping RBO Knowledge Center. They must not be hidden away in an obscure cubicle in Bangkok where they can be accessed only by a small circle of 'insiders'. Initial efforts in regional institutions related to spatial information systems and environmental monitoring are already being supported by ONEP and, as already mentioned[36], there

[36] See, for example, section I.B.6(e)

are equally important efforts supported by others. There is a strong and urgent need to begin linking these various efforts and to facilitate their convergence into a system with very important potential and implications.

As the various phases of RSBO development continue to unfold, there may also be additional needs for support functions or services at river basin or other higher levels of social organization. In order to provide one example, it is conceivable that a need for an ombudsman function could emerge, in order to provide a channel for various sub-basin stakeholders to seek redress for unjustifiable damages, abuse, or exploitation they believe they are suffering from RSBO programs, and that their plight is being unduly excluded or ignored by RSBO participatory processes.

Clearly, these types of activities should be developed through partnerships with various institutions, organizations, and groups already based and active in the Ping Basin. This is definitely not a call to create more high-overhead bureaucratic institutions that will try to compete with existing activities, or an information control point for any type of elitist cliques or special interests. Organization to meet these needs should be flexible and directed by a mindset that seeks coordination and partnerships aimed at facilitating widespread learning and mutual improvement of performance in achieving common objectives and goals. In any event, it makes sense to anticipate some of these needs now, and contribute to efforts that can help make them become a reality.

4. Strengthening long-term management planning and learning processes

International experience indicates that performance and long-term success of river basin organizations are strongly associated with careful assessment, consideration, and consensus building. These processes normally require a multi-year process even in highly developed countries where local capacities are already quite strong. Moreover, there is no evidence that substitute short-cut approaches have been able to meet these needs.

Thus, this phase shifts into a multi-year mode, wherein RSBOs seek to further broaden and deepen understanding and consensus in the sub-basin, and reflect results in further refinements of RSBO analysis, planning, monitoring and learning processes under the draft river sub-basin management plan. Emphasis during this phase needs to be on efforts that are conducted systematically and carefully, and not unduly rushed by unreasonable time constraints.

It is particularly important that these processes are not seen as yet a further iteration of redundant planning processes. As this phase begins, long-term RSBOs will be operational, initial action plans will have begun implementation, and monitoring processes will have begun operating. Thus, real experience and information will be providing a concrete context for considering how well processes are working and the directions in which they are headed. Hopefully, this should help facilitate efforts to further refine these processes and directions in order to achieve a broad enough consensus among stakeholders to make RSBOs meaningful and viable organizations. There are two basic lines of activity that are central to efforts during this phase to strengthen long-term management and planning processes, and both may wish to draw upon technical assistance from the basin-level support activities launched during the previous phase.

(a) Management plan elaboration, refinement and consensus building

There is a range of issues and concepts that stakeholders may need to consider as they elaborate and refine the sub-basin management plan and build consensus among sub-basin stakeholders. In order to encourage and support local decision-making, some of these considerations are posed here in the form indicative questions, rather than in the form of instructions or requirements. These questions have been constructed to reflect issue areas seen as important both from international experience and from current operational issues identified from previous and current activities in the Ping River basin and its sub-basins. They are meant to be indicative, however, and not an exhaustive list of the considerations that RSBOs might wish to make. Thus, efforts to answer these questions should help RSBOs raise even more questions, the answers to which should help lead to their

articulation improved long-term management plans and component strategies and designs for further developing and refining their RSBO through processes that are localized to the needs and wishes of sub-basin stakeholders in the context of their perceptions of conditions they face.

How discussion of these questions occurs is also likely to vary according to sub-basins, the type of organizational configuration they have selected, and the local adaptations they have made. Some answers are likely to be readily available, while others are not. Some will be more appropriate than others under conditions in a specific sub-basin. The considerations involved are many, and considerable time may be required to address the full range of issues. In some cases, stakeholder consensus may have already been reached, and representatives may feel confident to answer questions in multi-stakeholder meetings or workshops. In other cases, it may require a more iterative process where stakeholder representatives feel a need to confer with their constituency groups before interacting with other groups. Again, what is deemed as appropriate must be determined in the context of conditions and perceptions of stakeholders in each sub-basin.

Management plan components 1-2. **Linking mutual understanding with RSBO processes:** *How will a sense of common identity and direction be further developed and maintained?*

- What are the different views about what the sub-basin should look like 20 or 50 years from now? In order to achieve those views, what things need to be maintained or restored, and how? What things need to change, and how? Is there widespread agreement about these views? Who disagrees, and why?
- What are the common interests and the differences among stakeholder views inside the sub-basin about these issues? How do these differ from views of stakeholders downstream or connected with interests, agencies or organizations outside the sub-basin?
- Do stakeholders with different views have a mutual understanding of why those differences exist? If not, what can be done to improve communication and mutual understanding?
- Under each different view, who will benefit and be better off? Who will lose benefits, and what will they lose? How do you know? Who thinks this would be fair? Who thinks it would not be fair? Why?
- How can the RSBO assure all stakeholders (inside and outside the sub-basin) that their voice will be heard, and their needs and views will be fairly considered? How will they know if this is true? How often will stakeholders meet? Who are the leaders? Who makes the rules?
- How much do RSBO efforts or various stakeholder groups rely on government agency leadership? How much do they rely on individual leaders? What can be done to encourage more and broader leadership within the sub-basin?

Management plan components 1-3. **Linking problems & priorities to goals, objectives, projects and activities:** *How can action planning processes help solve real important problems?*

- What are the most important sub-basin problems? What problems require the most urgent attention? How do you know what projects are most important and most urgent?
- Which of these are within the RSBO mandate? Who is affected by these problems, and how? How do you know? Who is not affected by these problems, and why?
- What are the plans and projects that have already been developed? What important or urgent problem will they address, and how? Who will benefit from them, and why? Who will not benefit from them, and why? How do you know?
- What urgent problems are not addressed by current plans and projects? Why? Who suffers from these problems, and how? Who is not affected? Who can address these problems? What do they have to do? When? What resources and funding are required?
- What important problems are difficult to address by sub-basin projects? Who suffers and how? Who benefits from the current situation? Who is not affected? Why are they difficult to address? Could progress be made with more time? With more resources? With more

analysis, technical or other assistance from outside sources? With wider social or political alliances? What needs to be done to begin making progress? Who can do it? When? What resources and funding are required? How will you know if progress is being made toward long-term or distant goals?

- Could negotiations among groups with different views and interests help formulate compromise views that all sides could view as reasonable and fair? How much would each group benefit and lose from a compromise solution? Could part of the benefits received by one group be used to help compensate for losses of others? How would you know what was fair?
- Who could help stakeholders with different views and interests negotiate among themselves? How would they do this? Are there methods or tools that could help? Outside assistance?

Management plan component 4. **Monitoring and information strategy:** *How can monitoring, analysis and information management capacity be improved?*

- How do you know that projects will be conducted as planned? How do you know if they achieve their objectives? How do you know if they have significant impact on the problem they seek to address? How can future projects be improved from their experience?
- How do you know if a project is likely to be implemented as planned? How do you know if project cost is appropriate? How do you know if the results of a project are worth its cost?
- What information do you need to answer all of the questions above? Do you have that information? Could you get the information from known sources? How do you know if the information is complete, balanced and/or correct? How could the information be improved?
- What are the kinds of information where measurements are made and data records are kept? Who makes the measurements and keeps the records? What are the methods they use? Do you have access to the data? Do you know how to interpret and use the data? Do you know if the measurements and data are correct?
- Are there other types of information or data that could help answer important questions, help improve communication, or help facilitate negotiations, but are not available? Do you know how to obtain that information? How much of the information could be gathered from assessments or measurements made by sub-basin stakeholders themselves? Which ones? How could assistance or training help? Who could provide it?
- What does the RSBO need to do to help raise public awareness? What types of public education are needed? What topics? How do you know? How can information be most effectively packaged and communicated to different types of stakeholders? How do you know what approach is most effective? How will information from the RSBO be communicated to different stakeholder groups? Does the RSBO need assistance with public communication? If so, what type of assistance? Who could best provide the assistance? When? What would it cost?

Management plan component 5. **Partnerships and capacity building**: *What coalition and partnership relationships are important, and how will they be built?*

- What stakeholder groups have networks among individuals or small local groups in the sub-basin? Are there local sub-watershed management networks in the sub-basin? What other local groups and networks are involved with issues within the RSBO mandate? What have the networks or groups achieved? Where are they most effective or less effective? Why?
- How do stakeholder groups and networks interact with local governments? Does their local government listen to them? Do they have good suggestions or ideas that the local government could use? Do they ever get assistance from local government? Do they help plan or implement local government projects? Do local governments identify any as *prachakhom*?
- What stakeholder groups are parts of networks that reach beyond the sub-basin? What types of groups in other areas are also in their network? Are any of them linked with universities? NGOs? Other local governments? What information or assistance do they receive through the network? What do they contribute? Are there groups in other areas with whom sub-

basin stakeholders would like to develop network relationships? If so, what kind of groups, and where are they located? Who could help develop such relationships?

- Are there important powerful stakeholders located inside or outside the sub-basin who refuse to participate in or cooperate with RSBO? What is the source of their power? Are there higher-level sources of authority that could help the RSBO gain their cooperation? How can the RSBO seek assistance from that authority?
- How can the RSBO join with other sub-basins to help address issues at the Ping river basin or Chao Phraya river system levels? What kinds of things could be done best at the sub-basin level? What kinds of things need to be done at higher levels? How could the sub-basin participate and contribute?
- Are there other Ping sub-basins with similar issues and problems? How do you know what people in other sub-basins are doing? Do people in other sub-basins complain about problems coming from your sub-basin? Do you have problems caused by people in other sub-basins? Do people in other sub-basins have experience, activities, organizations or skills that you would like to learn more about? Do you have experience, activities, organizations or skills that could provide good examples or lessons for people in other sub-basins?

Management plan component 6. **Funding strategy:** *What are the various ways that funding can be mobilized to help maintain RSBO operations and programs over the long term?*

- How will programs and projects planned by the RSBO be integrated into development planning processes of local governments? Of provincial plans? Of relevant central agency units? Are there activities/projects that can be implemented locally without outside assistance? Are there other sources of assistance or funding? How do you know? Where can you find out?

(b) Annual progress reviews, learning and adjustments

The second basic line of activity central to efforts during this phase to strengthen long-term management and planning processes is closely related, but is focused specifically on experience that is being generated by implementation of activities and projects under initial action plans. Moreover, this is a line of activity that will most likely continue over the longer-term, well beyond this phase of RSBO development.

More specifically, initiation of an annual review process is proposed, wherein implementation progress is reviewed by the RSBO. Especially during initial early annual reviews, particular attention may be given to progress of 'demonstration' activities and projects contained in action plans. Data and information from RSBO monitoring systems should be included in the review. Discussions should be held with people in the sub-basin who believe there are clear benefits from the activity, as well as with skeptics and any people who believe they are suffering as a result of the activity.

Example objectives of the review of specific activities and projects could include: (1) to verify that inputs are received and outputs are being delivered as planned; (2) to identify what problems are being encountered and whether any additional information, capacity building, or other needs have emerged; (3) to determine the degree to which outputs are helping achieve the desired outcomes; (4) to determine whether there are any unanticipated negative consequences of the activity. (5) to identify ways in which the activity or project could be improved; (6) to determine whether there is potential for replicating or scaling up the activity or project in other parts of the sub-basin or in other sub-basins.

Objectives at the RSBO systems level would seek to determine how well the monitoring, analysis, planning, participation, and capacity building strategies and processes are functioning, and to make recommendations about how they could be further improved and refined.

Moreover, this annual review process is intended to become a key component of a long-term continuous learning cycle of problem identification, analysis, planning, monitoring, and outcome and impact assessment. As this is intended to be a participatory process involving all relevant sub-basin

stakeholders, transparency, public information access, and downward and upward accountability will be key factors in the ability of the RSBO to establish and maintain perceptions of its relevance, usefulness, and credibility among stakeholders. This, of course is what will be a major determinant of the degree of local participation, involvement, initiative and support.

5. Maintaining long-term organizational relevance, vitality and performance

This final phase of RSBO development takes the strengthened and well functioning organization into its long-term operation and maintenance mode. RSBOs are seen as long term organizations devoted to improving natural resource management, the environment, health, livelihoods, and various other aspects of the quality of life in their sub-basin domains. By the beginning of this phase, RSBO operations should include an iterative cycle of analysis, updating of goals, objectives and rolling project plans, implementing projects and activities, and monitoring conditions, outcomes and impacts. It is through this type of learning cycle that they will be able to continue making clear and meaningful step-wise progress toward their long-term objectives. And, this needs to be done in a manner that is transparent for all stakeholders. Moreover, they need to remain credible and accountable to both their local constituency groups and legitimate interests of downstream and larger society.

In order to continue functioning effectively over the long term, RSBOs also need to maintain the active participation of stakeholders, and assure that they perceive their efforts as being relevant to their needs and part of something that is both important and making a difference. This will require that RSBOs work to continually improve their operational systems and respond to changing conditions. One important element of this process is to establish a second learning cycle at another level and time horizon. This cycle would focus on analyzing changing conditions in the sub-basin, and periodically assessing the need for RSBO programs and operations, identifying ways to improve RSBO structure and functions so that they can better respond to those needs, implementing the changes needed, and monitoring the outcomes and impacts of their efforts on RSBO performance and stakeholder satisfaction.

Although establishment of a learning cycle at this level is quite far beyond the ability of this short-term project to develop, test and establish, seeds can be planted even during early phases. Indeed, if seen from the appropriate perspective, for example, the transition from the phase 1 preliminary sub-basin working group to the long-term RSBO established in phase 2 can itself be viewed as a first experience with efforts to review how well the RSBO structure and functions are able to be effective in helping achieve significant improvements in management of sub-basin resources and environmental services. The consensus building, learning and refinement processes that are built into the third and fourth phases are intended to further strengthen these processes, mindsets and information in a manner that should make periodic review and refinement of overall mandates, programs and structures a logically obvious process.

6. Factors affecting the time horizon of RSBO development

The above discussions have indicated that the first three phases of RSBO development may be relatively short, whereas the fourth phase involves a multi-year process, and the fifth and final phase moves the RSBO into an open-ended long-term operation and maintenance mode.

This final section seeks to bring somewhat more clarity to time horizon issues by briefly presenting some of the factors and issues that are likely to affect the relative amount of time required to complete various key elements and thus phases of RSBO development:

RSBO establishment. Establishment of the RSBO as discussed in this report will be the central activity of the second development phase. Thus, time requirements will include first phase efforts to develop the initial action plan, review of first phase experience, and agreement on a suitable organizational model and modifications. The main factors that should affect the duration of these activities include: (1) the amount and quality of plan development available from prior action plan-

ning processes led by DNP and/or DWP; as well as other local planning processes (2) the degree to which stakeholders agree or differ in their views on experience during the first phase; (3) the degree of unity among and within stakeholder constituencies regarding the most suitable organizational model and modifications; and (4) motivation and availability of key leaders and stakeholder representatives required to make these decisions.

Initial outline of long-term management plan. This activity is scheduled for the beginning of phase 3. Its timing and duration will depend on the degree to which previous work of local networks, activities associated with prior action planning processes, and reviews of experience during phase 2 are able to provide a solid foundation for articulation of the components of a full-scale sub-basin management plan. If there are clear ideas and relatively unified views, it is possible that this could be done quite quickly. If there is still confusion, many questions, and divergent points of view, the process could require at least several months. In any event, if basin-level mobile technical assistance teams are also being established during the third phase, they may be able to assist sub-basins in negotiating agreement and articulating the plan in an appropriate form for further refinement during phase 4.

Action plan implementation. Initial sub-basin action plans will be developed during phase 1, and are likely to be largely based on projects and activities included in prior planning processes under the leadership of DNP and/or DWP. If these initial action plans are developed considering the framework of RSBO development proposed in this report, the initial action planning process should be able to be completed quite quickly – assuming sufficient sub-basin stakeholder availability and motivation. The RSBO development framework proposed here provides for action plan funding approval processes to occur during the second phase, so that implementation of the initial action plan could begin as phase 3 is entered. Since this could be a quite short period of time, one hopes that there are sufficient earmarked or discretionary funds available in the government system to allow for this type of timing. As indicated in various sections of this report, it is very important for the credibility and momentum of RSBO development efforts that implementation begins in this type of time frame. Moreover, this proposed RSBO development framework assumes this to be the case, and incorporates learning from initial action plan implementation as a key component of further RSBO development processes.

Capacity building. While there will be some capacity building activities that are to begin under the pilot project during phases 1 and 2, it should be very clear that capacity building will be a quite long-term process with needs that will continue to evolve at least through phase 4 of the RSBO development process. This is one of the primary reasons that a basin-level learning center and technical support operations are proposed for establishment during phase 3. These operations should receive very high priority for medium to long-term support, and if they can be implemented in an effective manner, they should be able to more than justify the investments required by accelerating and improving the quality of RSBO development processes.

Elaborating and refining the management plan and building stakeholder consensus. It should by now be clear that this core component of phase 4 efforts should be a multi-year process. Indeed, its companion implementation progress review and learning cycle refinement process will occur in annual cycle increments. Under most circumstances, it would appear that at least 2 to 3 cycles would be necessary to assure performance is adequate. Moreover, the breadth and depth of stakeholder understanding and consensus required for the sub-basin management plan to become a really meaningful element of local resource governance, and a guide for livelihood behavior and development, will in all likelihood require extensive and iterative investigation, analysis and consensus-building processes. Experience demonstrates that these should not, and cannot be unduly rushed. And, since action plans are being implemented in tandem with these processes, there would appear to be no reason why enough time could not be provided to conduct these tasks properly.

Long-term participation and satisfaction. This key component of phase 5 is in a category of its own in that this is an open-ended process. It is expected, however, that the periodicity of overall RSBO system reviews would not be likely to occur at less than about 5-year intervals. There could be pro-

visions, however, for a petition submitted by a specified percentage of stakeholder representatives in the RSBO assembly to conduct a special system review due to significant contextual changes, urgent unanticipated problems, or emergence of significant improprieties.

Summary of Suggestions and Recommendations in Part III:

1. It is useful for leaders of, and advisors to, efforts to develop sub-basin management organizations to understand the global context of trends toward river basin management, including:
   - intergovernmental agreements & institutional polices (discussed in section III.A.1(a))
   - emerging global & regional civil society organizations (discussed in section III.A.1(b))
   - recent international literature on river basin organizations (discussed in section III.A.2)

   Suggested overall lessons that can be drawn from international experience with river basin organizations are summarized in section III.A.3.

2. Based on review of experience at both international and Ping River Basin levels, six areas of consideration are proposed for priority consideration in developing models of organization for river sub-basin management organizations (RSBOs):

   - Mandate, responsibilities & authority. Conditions in the Ping Basin favor a broad and integrated mandate for RSBOs, but their roles and responsibilities need to constructively complement regular development planning processes and the administration hierarchy. Both 'expert' and local knowledge need to be combined in problem identification & analysis, but either agencies or local organizations probably need to take a leadership role. Program and project planning is an area for RSBO leadership, but an overall sub-basin management plan is needed to provide goals, objectives, priorities, and resource allocation. RSBOs need to clarify their roles in terms of project implementation and any regulation functions. Conditions in the Ping Basin argue for a strong RSBO role in monitoring & learning. Access to sources of authority will depend on a common sense of ownership.

   - Representation: core membership, constituencies & selection processes. Particular attention needs to be given to achieving appropriate stakeholder balance among sectors, between central & local government, among elements of local governance systems, and between gender groups. The main RSBO 'assembly' or decision-making body needs to be of a manageable size, probably in the range of 20-50 representatives, with appropriate working sub-groups, Selection of stakeholder representatives needs to be transparent and participatory, while allowing flexibility for election or consensus processes. Those outside the entourage of an organized interest group also need representation, and mechanisms such as fixed terms are needed to assure all representatives are accountable to their constituents.

   - Leadership. While flexibility needs to be maintained, attention needs to be given to the individual leadership qualities and characteristics of potential leaders. Where numerous factions exist, cohesion may be encouraged by election standards higher than a plurality of voters. If new selection procedures are established, current leaders should be encouraged to become candidates.

   - Institutional positioning & linkages. RSBOs will need to develop linkages with other organizations at levels above & below the sub-basin in organizational hierarchies, as well as peer-to-peer linkages among organizations at similar levels. The principle of subsidiarity implies more local levels should take the lead in most issues, and raise issues they have difficulty addressing to the RSBO. The RSBO should pass issues they cannot resolve to river basin or other higher levels. All levels need sufficient authority

and resources to take initiative at their level, and all must be accountable for their actions. Alliances will be needed among local organizations within sub-basins, among sub-basins in the context of river basin level issues and processes, and among local groups with similar concerns in networks that cross sub-basin boundaries. RSBOs should seek partnerships to strengthen their overall operations.

- Legal status. RSBOs should consider the advantages and disadvantages of different options for their official legal status, and there should be flexibility for it to change over time as capacity develops and conditions change.
- Operational components & specialists. While RSBOs should have flexibility to design their own structure, they need to consider at least 3 basic types of components: (a) an RSBO assembly where the full range of stakeholder representatives conducts overall deliberations & decision-making processes; (b) permanent & temporary working groups to lead efforts in program & project planning, data & communications, public participation & awareness, problem identification & analysis, and monitoring & learning; (c) a secretariat to conduct administrative & operational tasks, support working groups, & manage facilities. Location of the secretariat needs careful consideration.

3. An array of five alternative sub-basin organizational models is proposed for consideration, selection & adaptation by sub-basin working groups & stakeholders (see Figure 3-5):
   - Focused government model. Main focus is on helping MoNRE design & implement its programs in a more effective & efficient manner, and coordinate work of its agencies. MoNRE takes a strong leadership role, with RSBO providing assistance.
   - Broader government model. Main focus is on improving effectiveness & efficiency of programs within MoNRE, plus coordination with other ministries. Provincial administrations partner with MoNRE in coordination & integration of plans, with RSBO assisting.
   - Central – local partnership model. Main focus is on a partnership between central & local levels, with the RSBO providing more leadership in identifying & analyzing problems, planning monitoring of conditions & impacts, and public awareness. Participating ministries are reaching down to local partners for work within their mandates.
   - Local – central partnership model. Main focus is on a local-central partnership with RSBO leading most tasks. Local organizations and civil society groups are reaching up for partnerships with relevant ministries under locally defined mandates.
   - Local non-government model. Main focus is on mobilizing non-governmental groups & civil society institutions to formulate, advocate & monitor activities within a locally-defined RSBO mandate.

4. A five phase process is proposed for developing river sub-basin management organizations (RSBOs) in the context of the Ping River Basin, as summarized in Figure 3-6:
   - Getting started. This phase builds on existing organizations & plans in establishing a preliminary sub-basin working group & formulating initial action plans. Emphasis is on articulating goals, objectives, criteria & priorities for selecting action plan component projects, reviewing & screening existing sub-basin plans, linking with TAO & provincial plans, & selecting priority 'demonstration' activities & local studies.
   - Establishing long-term organization and process. This phase centers on participatory review of experience with planning processes at sub-basin and other relevant levels, and selection and localization of an initial organizational model for a long-term RSBO. Views should also be solicited about directions in which the RSBO should evolve.
   - Launching implementation in a River Basin Management framework. This phase moves into 'multi-tasking' mode, wherein activities under the initial action plan begin

implementation, and monitoring systems begin to be established and activated. At the same time, a broader RSBO Management Plan (see Figure 3-9) is outlined, which includes strategies for monitoring, information, partnerships, capacity building & funding. Initial implementation of the capacity building strategy also begins, in parallel with efforts at the Ping River Basin level to build support capacities in terms of a knowledge center, mobile technical support teams, and data & analytical systems.

- Strengthening long-term management planning & learning processes. This phase moves to a multi-year approach, with emphasis on broadening and deepening understanding and consensus in the sub-basin. RSBO structures, plans and processes are further refined, based on careful consideration of various views, and emphasis on learning from experience with actual implementation activities. To help stimulate these considerations, a number of questions are suggested in section III.D.4. An annual review process would become part of a long-term continuous learning cycle of problem identification, analysis, planning, monitoring, and outcome & impact assessment. This process should be participatory, inclusive, transparent, accessible, and both downwardly and upwardly accountable.
- Maintaining long-term organizational relevance, vitality & performance. The final open-ended phase takes well-functioning RSBOs into long-term operation & maintenance mode. In addition to annual learning & adjustment cycles, a second perhaps 5 to 6 year cycle is added to focus on longer-term changing conditions, & on assessments of RSBO performance & stakeholder satisfaction, including needs for programs & operations, and ways to improve structures & functions to respond to those needs.

5. Suggestions about factors that are likely to influence the time frame required to implement this five phase process of RSBO development can be found in section III.D.6.